March 15, 2006

VIA UPS

Mary Logan U.S. EPA Region V (SR-6J) 77 W Jackson Boulevard Chicago, IL 60604-3590

RÜTGERS Organics Corporation

GERS:

Sheila Abraham
Ohio EPA - NE District Office
Div. Of Emergency & Remedial Response
2110 East Aurora Road
Twinsburg, OH 44087

Remedial Response Section Manager Ohio EPA - DERR P.O Box 1049 Lazarus Government Center Office 122 South Front Street Columbus, OH 43216-1049

Re: FEBRUARY 2006 MONTHLY REPORT

RI/FS & REMOVAL ACTION NEASE CHEMICAL SITE SALEM, OHIO

In accordance with Paragraph X E of the Administrative Order by Consent regarding a Remedial Investigation/Feasibility Study (RI/FS) of the Nease Chemical Site in Salem, Ohio, attached is a copy of the February 2006 RI/FS Progress Report.

Additionally, in accordance with Paragraph 14 of the Administrative Order by Consent, signed November 17, 1993, attached is a copy of the February 2006 Removal Action Progress Report

Please contact us if you have any questions regarding activities discussed in these reports.

Sincerely,

Dr. Rainer F Domalski Site Coordinator

Enclosures

cc M. Hardy - Thompson Hine

Steve Finn - Golder Associates, Inc

031506

201 Struble Road State College, PA 16801

Phone 814-238-2424 Fax 814-238-1567 web-site http RUETGERS-ORGANICS-CORPCOM

Member of the RUTGERS Chemicals Group

US EPA RECORDS CENTER REGION 5

NEASE CHEMICAL SITE, SALEM, OHIO REMEDIAL INVESTIGATION/FEASIBILITY STUDY MONTHLY PROGRESS REPORT FEBRUARY 2006

1.0 INTRODUCTION

This progress report has been prepared in accordance with Paragraph XE of the Administrative Order of Consent regarding a Remedial Investigation/Feasibility Study of the Nease Chemical Site in Salem, Ohio The report summarizes the major RI/FS actions during the month along with investigation results and any problems encountered in the project. Activities planned for next month are also presented.

2.0 SUMMARY OF ACTIVITIES PERFORMED

2 1 PROJECT ACTIVITY SUMMARY

The activities that were initiated and/or completed during the month are described. All activities were performed in accordance with the detailed protocol provided in the approved Work Plan.

2.2 FIELDWORK

None

2.3 REPORTS

2 3.1 REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS)

The final Record of Decision for Operational Unit #2 (onsite) was signed by the agency on September 29, 2005. The agency submitted a draft Administrative Order of Consent (AOC) for the pre-design investigation and design of the remedial action to ROC at the beginning of January 2006. ROC made a good faith offer to negotiate the AOC with the agency.

In preparation of the upcoming Feasibility Study (FS) for OU-3 (Feeder Creek, MFLBC), the agencies and ROC agreed on additional sampling in the MFLBC including sediment, fish, surface water and flood plain soil to have a sufficient data base for the study. The first step, the reconnaissance of sediment bodies in the MFLBC, was performed from August 1 through 15, 2005. Sediment and fish samples were taken in the week of October 10, 2005, the surface water samples in the last October week. The analytical results of the samples taken were validated by the ROC's technical consultant and submitted to the agencies. Sampling locations for the flood plain soil were determined. Ohio EPA contacted the property owners at these locations and informed them the upcoming event. ROC has obtained an access agreement with the owners.

2.4 MEETINGS

On February 17, 2006, US EPA, OEPA and ROC had a meeting discussing mainly the upcoming field and pilot work during the pre-design phase for OU-2.

3.0 VARIATIONS FROM THE APPROVED RI/FS WORK PLAN

None

4.0 RESULTS OF SAMPLING, TESTS AND ANALYSES

None

5.0 PROJECT SCHEDULE

The current Work Plan schedule identifies completion and target dates for project activities. Those scheduled to occur over the next several months include

Feasibility Study OU-3 (Feeder Creek, Middle Fork of Little Beaver Creek)

6.0 DIFFICULTIES ENCOUNTERED AND ACTION TAKEN TO RESOLVE PROBLEMS

No significant difficulties were encountered.

7.0 PERSONNEL CHANGES

None

8.0 ANTICIPATED PROJECT ACTIVITIES FOR MARCH 2006

- Monthly Progress Report February 2006
- Develop data base for upcoming FS for OU-3 (Feeder Creek/Middle Fork of Little Beaver Creek)
- MFLBC Flood plain sampling

031506

TABLE 1 NEASE CHEMICAL SITE, SALEM, OHIO RI/FS SCHEDULE

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
	Documentation of the Site Activities through July 31, 2004 can be reviewed in the July 2004 Monthly Progress Report
August 30, 2004	US EPA Region V/ OEPA approve Endangerment Assessment
September 1, 2004	Draft Feasibility Study (OU-2) submitted to the agencies for review
September 9, 2004	Submit Monthly Progress Report
September 13, 2004	Submit Final Revision to Endangerment Assessment
October 8, 2004	Submit Monthly Progress Report
November 10, 2004	Submit Monthly Progress Report
November 22, 2004	Received Agencies' comments for draft FS (OU-2)
December 10, 2004	Submit Monthly Progress Report
January 10, 2005	Submit Monthly Progress Report
February 10, 2005	Submit Monthly Progress Report
March 1, 2005	Final Draft Feasibility Study (OU-2) submitted to agencies for review
March 4, 2005	Submit Monthly Progress Report
April 8, 2005	Submit Monthly Progress Report
April 21, 2005	US EPA Region V/OEPA approve Final Feasibility Study for OU-2
May 9, 2005	Submit Monthly Progress Report
May 31, 2005	US EPA Region V published the Proposed Remedial Action the OU-2 (onsite)
June 9, 2005	Submit Monthly Progress Report
July 8, 2005	Submit Monthly Progress Report
August 10, 2005	Submit Monthly Progress Report
Aug. 1 - 15, 2005	MFLBC – Reconnaissance of sediment bodies
September 9, 2005	Submit Monthly Progress Report
September 29, 2005	US EPA Region V signs Final Record of Decision for OU-2
October 10, 2005	Submit Monthly Progress Report
November 9, 2005	Submit Monthly Progress Report
December 8, 2005	Submit Monthly Progress Report
January 9, 2006	Submit Monthly Progress Report
February 8, 2006	Submit Monthly Progress Report
March 15, 2006	Submit Monthly Progress Report

NEASE CHEMICAL SITE, SALEM, OHIO REMOVAL ACTION MONTHLY PROGRESS REPORT FEBRUARY 2006

1.0 INTRODUCTION

This progress report has been prepared in accordance with Paragraph 14 of the "Order" section of the Administrative Order by Consent (AOC) Docket No V-W-94-C-212, effective November 17, 1993, regarding a Removal Action for the Nease Chemical Site in Salem, Ohio The report summarizes the major activities during the month along with investigation results and any problems encountered on the project. Activities planned for next month are also presented

2.0 SUMMARY OF ACTIVITIES PERFORMED

2.1 PROJECT ACTIVITY

The activities that were initiated and/or completed during this month are described below Activities were performed in accordance with the Removal Action AOC

The agencies and ROC discussed modifications of the existing onsite groundwater treatment system to optimize the protection against spills. ROC summarized the modifications agreed by the parties in a letter to the agencies. The necessary scope of work is currently for bid at several contractors

2.2 WORK PLAN PREPARATION/REPORTS

No work plans/reports were submitted this period

2.3 FIELDWORK

2 3 1 SITE INSPECTIONS

The results of the monthly site inspection carried out at the site on February 27, 2006 are shown in Attachment 1.

2.3 2 MONTHLY WATER LEVEL MEASUREMENTS

The quarterly water level measurements were conducted on February 27, 2006.

2 3 3 TREATMENT PLANT OPERATION

The treatment plant operated mostly normal throughout the month

2.4.1.1 MEETINGS

None

3.0 VARIATIONS FROM THE APPROVED REMOVAL ACTION WORK PLAN

None

4.0 RESULTS OF INSPECTIONS, ENVIRONMENTAL SAMPLING, TESTS AND ANALYSES

Water monitoring samples were collected from the treatment plant on February 1 and 15, 2006 (see Attachments 2 and 3; Lab. Exygen Research). The evaluation for acute toxicity was conducted from February 14 through 18, 2006 Attachment 4. The planned evaluation of the chronic toxicity could not perform because the samples were not delivered in time. In agreement with the agency, this test will be done during the next quarterly sampling for acute toxicity

5.0 PROJECT SCHEDULE

The updated Work Plan schedule identifies completion and target dates for project activities

6.0 DIFFICULTIES ENCOUNTERED AND ACTION TAKEN TO RESOLVE PROBLEMS

As result of an OEPA site inspection in April 2004 and the overflow of the GWTP influent tank in June 2004 ROC has proposed some modification of the groundwater treatment system US EPA Region V and OEPA approved the proposed changes Golder, ROC's consultant, has submitted a detailed design that will be subject to the agencies' review. Final modifications were agreed on during a conference call on August 16, 2005. The results were summarized in a letter report to the agencies. Golder submitted bidding documents to several contractors

On February 18, 2006, the leachate collection system LC-2 had to be shutdown because of an apparent leak in the transfer pipe from the pump sump to the storage tank. The agencies were informed right-away. Several tests were conducted (i.e., functionality of the check-valves). After filling the discharge pipe with clean water, it appears that there is a leak right where the pipe starts at the pump sump. ROC has contracted Whan Construction for digging up the pipe in this area. The work will be performed mid-March under supervision of ROC's consultant, Golder Associates.

7.0 PERSONNEL CHANGES

No personnel changes occurred during month.

8.0 TYPES AND QUANTITIES OF REMOVED MATERIALS

For the period from February 1 through 28, 2006 the following material was removed:

- 10,300 gallons of leachate and/or backwash water were disposed off-site at a licensed treatment facility.
- Approximately 78,760 gallons were pumped from Leachate Collection System 1 (LCS-1) (total for LCS-1 ≈18,247,646 gal).
- Approximately 3,267 gallons were pumped from Leachate Collection System 2 (LCS-2) (total for LCS-2 = 1,402,788 gal)
- No water was pumped from Pond 1 (total for the pond = 962,084 gallons).
- Approximately 6.5 pounds of organic compounds were removed during pumping (estimate based on average VOC/SVOC concentrations for each source).

9.0 ANTICIPATED PROJECT ACTIVITIES FOR MARCH 2006

Removal Action activities scheduled for the upcoming month include on-going implementation of the approved Removal Action Work Plan involving.

- Collection of groundwater from the existing collection systems LCS-1, LCS-2 and Pond 1.
- Implementation of planned treatment plant modifications
- Repair of Leachate Collection System LCS-2
- Monthly Progress Report for February 2006

031506

TABLE 1 NEASE CHEMICAL SITE, SALEM, OHIO REMOVAL ACTION SCHEDULE

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
	Documentation of the Site Activities through July 31, 2004 can be
Santambar 9, 2004	reviewed in the July 2004 Monthly Progress Report Submit Monthly Progress Report
September 9, 2004	1
October 8, 2004	Submit Monthly Progress Report
November 10, 2004	Submit Monthly Progress Report
December 10, 2004	Submit Monthly Progress Report
January 10, 2005	Submit Monthly Progress Report
February 10, 2005	Submit Monthly Progress Report
March 4, 2005	Submit Monthly Progress Report
April 8, 2005	Submit Monthly Progress Report
May 9, 2005	Submit Monthly Progress Report
June 9, 2005	Submit Monthly progress Report
July 8, 2005	Submit Monthly Progress Report
August 10, 2005	Submit Monthly Progress Report
September 9, 2005	Submit Monthly Progress Report
October 10, 2005	Submit Monthly Progress Report
November 9, 2005	Submit Monthly Progress Report
December 8, 2005	Submit Monthly Progress Report
January 9, 2006	Submit Monthly Progress Report
February 8, 2006	Submit Monthly Progress Report
March 15, 2006	Submit Monthly Progress Report

ATTACHMENT 1

RESULTS OF MONTHLY SITE INSPECTION NEASE CHEMICAL SITE, SALEM, OHIO FEBRUARY 2006

SITE INSPECTION FORM RUETGERS-NEASE CORPORATION Nease Site, Salem, Ohio

Date of Inspection: 2-27-06			
Entry Time: 830 HRS	Exit Time:	1200 Hes	<u> </u>
Weather: CLOUDY + GLD	 -	. •	
Inspector's Name: DENNIS L. LA	NE		
Inspector's Company: Hov	wells and Baird, Inc.	. · · · · · · · · · · · · · · · · · · ·	

INSPECTION RESULTS

SPECIFIC OBSERVATIONS:

Structures

(Responses: S = Satisfactory U = Unsatisfactory Yes/No Levels Measured in Feet, N/A = Not Applicable)

	Pump	Quick Connect	Water Level	Berm, Erosion;	Visible 7 Leakage
Leachate Collection System 1 (LCS-1)	S	S	7.60	N/A	No
Leachate Collection System 2 (LCS-2)	S	S	5.91	N/A	YES Punt OFF
Pond 1 Pumphouse	S	S	9.24	N/A	No
Pond 1 Berm	N/A	N/A	N/A	No	No
Pond 2 Embankment	N/A	N/A	N/A	No	No
Exclusion Area A Embankment	N/A	N/A	N/A	No	No
Storage Tank	N/A	5	3.98	N/A	No
Other (specify)			-		

SPECIFIC OBSERVATIONS:

Sediment Barriers

Condition of Sediment Barriers

Barrier ID	Fabric Intact?	By Passing Evident?	Is Maintenance Necessary?
Sediment Control Structure 1	YES	No.	No
Sediment Control Structure 2	YES	No	No
Fabric Barrier 2	YES	No	No
Fabric Barrier 3	YES	No	No
Fabric Barrier 4	YES	No	No
Fabric Barrier 5	YES	No	No
Fabric Barrier 8	YES	No	No
Fabric Barrier 9	Yes	N.	No
Fabric Barrier 10	YES	No	No
Rock Barrier 1	YES	N.	No
Rock Barrier 2	YES	No	No
Pond 7 - North	YES	No	N.
Pond 7 - South	YES	No	No

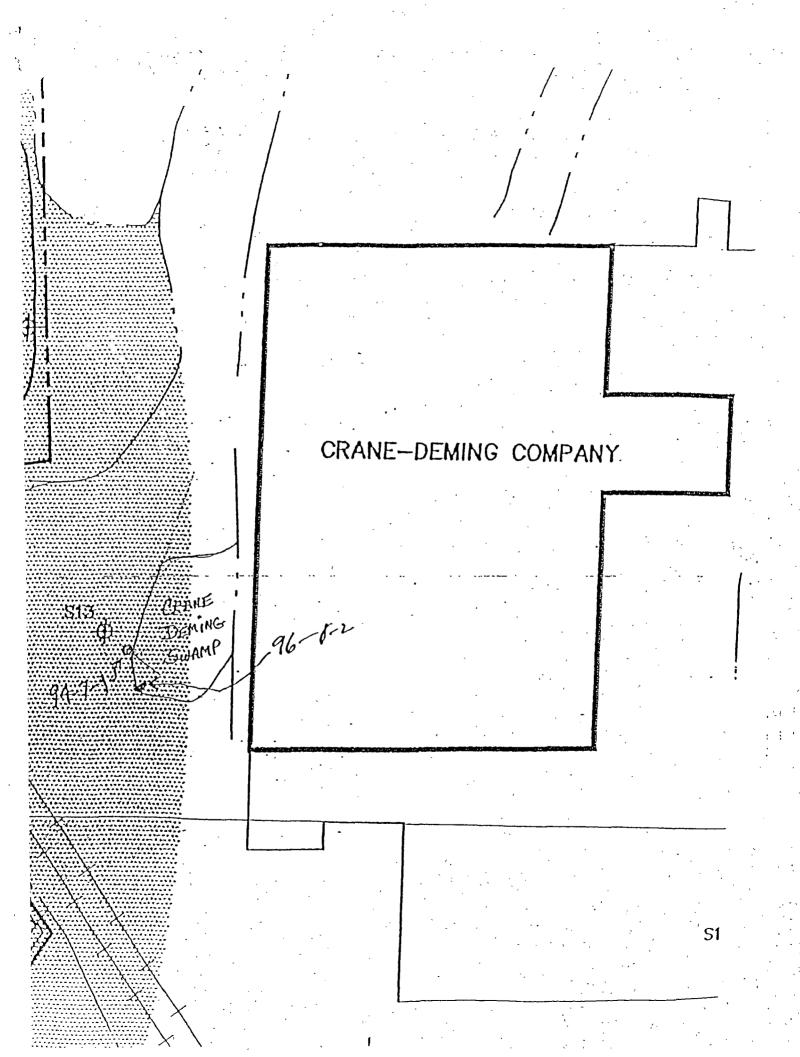
SPECIFIC OBSERVATIONS:

Seeps (if present, use more forms, as necessary)

Seep.ID: -/ (Vr-month-#)	Located on Map	Areal Extent (ft.2)	Magnitude
94-7-1	YES	20	NON-FLOWING SEEP
96-8-2	YES	20	Non-FLOWING SEEP
	, .		

Note Seep ID # equal the "nth' observed seep during the yr-month in question

ADDITIONAL OBSERVATION OR REMARKS:	•			•		
Inspector's Name: DENNIS L. LANE	. , .			 - ′		
Inspector's Signature: Dennis L. Jane		,				
Date: 2-28-06	. *		-			



ATTACHMENT 2

QUARTERLY WATER LEVEL MEASUREMENTS – FEBRUARY 27, 2006 NEASE CHEMICAL SITE, SALEM, OHIO

Quarterly Monitoring Well Water Level Measurements Form Ruetgers Organics Corporation Nease Site, Salem, Ohio

Date of Inspection:

February 27, 2006

Entry Time: 9:00

Exit Time: 4 00

Inspector's Name: Gerald Wilhelm **Inspector's Company:** Howells & Baird

Inspector's Signature <u>Herald 2. Wellashed</u>

Well	Depth to	Casing &		
Number	Water	Lock	Date	Comments
	(feet)	Intact?		
AUBA	28 87	Yes	02/27/06	
A-S	14 20	Yes	02/27/06	
B-S	10.53	Yes	02/27/06	
C-S	7.13	Yes	02/27/06	
CLBA	12 60	Yes	02/27/06	
CUBA	10.12	Yes	02/27/06	
D-1	22 12	Yes	02/27/06	
D-2	24.94	Yes	02/27/06	
D-3	1121	Yes	02/27/06	
D-4	21 64	Yes	02/27/06	
D-5	31 51	Yes	02/27/06	
D-6	20.44	Yes	02/27/06	
D-7	3.65	Yes	02/27/06	
D-8	2.54	Yes	02/27/06	·
D-9	13 09	Yes	02/27/06	
D-10	10.09	Yes	02/27/06	
D-11	23.21	Yes	02/27/06	
D-12	21.98	Yes	02/27/06	
D-13	30 10	Yes	02/27/06	
D-14	6.72	Yes	02/27/06	
D-15	7 16	Yes	02/27/06	
D-16	0.00	Yes	02/27/06	
D-17	4 89	Yes	02/27/06	
DLBA	0.00	Yes	02/27/06	
DVF2	?	Lid Bolted On	02/27/06	
DVF3 D-S	4.03	Yes	02/27/06	,
ELBA	2 59	Yes	02/27/06	
EVF1	6 32	Yes	02/27/06	
EVF2	9.96	Yes	02/27/06	
EVF3	5 52	Yes	02/27/06	
EVF4	4 62	Yes	02/27/06	
EW-4	10.00	Yes	02/27/06	
EW-5	10 89	Yes	02/27/06	· · · · · · · · · · · · · · · · · · ·
FLBA	10.31	Yes	02/27/06	
FVF3	11 44	Yes	02/27/06	
FVF4	12.84	Yes	02/27/06	

Monthly Monitoring Well Water Level Measurement Form Ruetgers Organics Corporation Nease Site, Salem, Ohio

Date of Inspection:

February 27, 2006

Entry Time:

8.00

Exit Time: 4.00

Inspector's Name:

Gerald Wilhelm Inspector's Company: Howells & Baird

Inspector's Signature Denald 2. Willialm

Well	Depth to	Casing &		
Number	Water	Lock	Date	Comments
	(feet)	Intact?	,	
FVF6	10.51	Yes	02/27/06	
GUBA	3.42	Yes	02/27/06	
H-S	5.27	Yes	02/27/06	
HUBA	16.20	Yes	02/27/06	
HVF1	15.02	Yes	02/27/06	
I-SHALE	15 71	Yes	02/27/06	
ILBA	49.84	Yes	02/27/06	
I-S	15 72	Yes	02/27/06	
IUBA	28.24	Yes	02/27/06	
JLBA	4 76	Yes	02/27/06	
JVF2	11 63	-Yes	02/27/06	
JVF3	9.44	Yes	02/27/06	
JVF4	7 26	Yes	02/27/06	
KLBA	0.77	Yes	02/27/06	
KVF2	0.34	Yes	02/27/06	
KVF4 K-S	2 61	Yes	02/27/06	
LBA	22 35	Yes	02/27/06	
LVF1	12 29	Yes	02/27/06	
LVF2	17.01	Yes	02/27/06	
P-1A	5.84	Yes	02/27/06	
P-2A	6 80	Yes	02/27/06	
P-3A	6 79	Yes	02/27/06	
P-1U	37.95	Yes	02/27/06	
P-1L	34 39	Yes	02/27/06	
P-2U	29.62	Yes	02/27/06	
P-2L	38.12	Yes	02/27/06	
PZ-1	11 25	Yes	02/27/06	
PZ-2	12.82	Yes	02/27/06	
PZ-3S	11 41	Yes	02/27/06	
PZ-3M	22.05	Yes	02/27/06	
PZ-3B	31 16	Yes	02/27/06	
PZ-4S	10.15	Yes	02/27/06	
PZ-4M	18 91	Yes	02/27/06	
PZ-4B	26.95	Yes	02/27/06	
PZ-5S	3 38	Yes	02/27/06	
PZ-5M	13 79	Yes	02/27/06	· ·

Monthly Monitoring Well Water Level Measurement Form Ruetgers Organics Corporation Nease Site, Salem, Ohio

Date of Inspection:

February 27, 2006

Entry Time:

8.00

Exit Time: 4 00

Inspector's Name: Gerald Wilhelm Inspector's Company: Howells & Baird

Inspector's Signature Derald Z. William

Number	Water	Lock	Date	Comments
	(feet)	Intact?	1	•
PZ-5T	12 49	Yes	02/27/06	
PZ-5B	14 17	Yes	02/27/06	
PZ-6B-U	15 47	Yes	02/27/06	
PZ-6B-M	14.61	Yes	02/27/06	
PZ-6B-L	13.62	Yes	02/27/06	
PZ-7	6.84	Yes	02/27/06	
RW-1	24.19	Yes	02/27/06	
S-1	11 82	Yes	02/27/06	
S-2	6 53	Yes	02/27/06	
S-3	4.66	Yes	02/27/06	
S-4	4 26	Yes	02/27/06	
S-5	13 41	Yes	02/27/06	
S-6	5 36	Yes	02/27/06	
S-7	4.27	Yes	02/27/06	,
S-8	3 62	Yes	02/27/06	
S-9	15 11	Yes	02/27/06	
S-10	9 19	Yes	02/27/06	
S-11	7.31	Yes	02/27/06	
S-12	2 61	Yes	02/27/06	
S-13	4 25	Yes	02/27/06	
S-14	2 35	Yes	02/27/06	
S-15	1 04	Yes	02/27/06	
S-16	11.43	Yes	02/27/06	
S-17	2 23	Yes	02/27/06	
S-18		Yes	02/27/06	
S-19	7.56	Yes	02/27/06	
SP-1	4.71	Yes	02/27/06	
SP-2	4.72	Yes	02/27/06	
SP-3	4 62	Yes	02/27/06	
SP-4	4 72	Yes	02/27/06	
SP-5	4 62	Yes	02/27/06	
SP-6	5 30	Yes	02/27/06	
LCS-1	5 66		02/27/06	-
LCS-2	4 71		02/27/06	
Pond 1	9.29		02/27/06	
				

Site Inspection Form Ruetgers Organics Corporation Nease Site, Salem, Ohio

Date of Inspection:

Inspector's Name: Gerald Wilhelm

Inspector's Signature

2-28-06

Date

ATTACHMENT 3

WATER SAMPLING RESULTS – FEBRUARY 1, 2006 NEASE CHEMICAL SITE, SALEM, OHIO



Analytical Report

Rütgers Organics Corporation

Exygen Research Project:

L7377

Testing Laboratory

Exygen Research 3058 Research Drive State College, PA 16801

Requester

Dr. Rainer Domalski Rutgers Organics Corporation 201 Struble Road State College, PA 16801



1 Introduction

Results are reported for the analysis of samples taken on 2/1/06. The samples were received from Rutgers Organics Corporation.

2 Sample Receipt

The sample shipment was logged in and given a unique Exygen laboratory identification number. All samples were stored refrigerated at 4°C from time of receipt until analysis. A copy of the custody documents, and sample login reports are presented in Attachment A. Listed below is the sample receipt information for the project received.

The samples were received on 2/2/06 in one package. The samples were received at 2.8°C.

Sample Identification	Exygen ID	Date Sampled	Sample Matrix	Requested Analysis
Influent 2-1-06	L7377-1	2/1/06	Water	ammonia-nitrogen, phosphorus, nitrate+nitrite
Effluent 2-1-06	L7377-1	2/1/06	Water	ammonia-nitrogen, phosphorus, nitrate+nitrite

3 Sample Analysis

3.1 Analysis

Listed in Table 1 are the parameters, methods and laboratory performing each of the analysis.

Table 1

Parameter .	Method	Laboratory
ammonia-nitrogen	EPA 350.1	Severn Trent Laboratories (Pittsburgh)
phosphorus	EPA 365.2	Severn Trent Laboratories (Pittsburgh)
nitrate+nitnte	EPA 353.2	Severn Trent Laboratories (Pittsburgh)

3.2 Holding Times

All holding times were met for the requested analysis.

3.3 Quality Control

Quality control included those parameters prescribed by each method or SOP.

3.4 Sample Related Comments

Any problems encountered during the analysis of these samples are listed in the case narrative.

4 Data Summary

Results for this project are reported in Attachment B.

5 Data/Sample Retention

Samples are disposed of one month after the report is issued unless otherwise specified. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by Exygen Research. Hardcopy data is stored for a minimum of five years.

6 Attachments

- 6.1 Attachment A: Chain-of-Custody
- 6.2 Attachment B: Severn Trent Laboratories (Pittsburgh)

Attachment A

Chain-Of Custody



3058 Research Drive State College, PA 16801

Phone: 814-272-1039 Fax: 814-231-1580

True

True

True

True

Conform COC Sample.

Conform COC:

Conform Sample.

Conform Request.

Login Group: L0007377

Login #. Project:

7488 P0001881

Company Name¹

Rutgers Organics Rainer Domalski

Submitted By Login Type⁻

Immediate Receipt of Samples

Started:

True

Date Start. Due Date.

02/02/2006 02/12/2006

Login Initiated Received By:

02/02/2006 Edwards, Eric

Spread Sample.

Label:

Exygen SD/PI

Biss, Jeffrey

Project Title/Type Environmental Sample Analysis / ROUTINE

Login Notes

Packages / Containers

<u>Package</u>	<u>Carton</u>	Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
PK0008512	Received Package &	Date: 2/2/06 10:20 Contents Uncompromised	FEDEX 8560 5501 0686	Wet Ice 2 8	RECEIVED Edwards, Eric
Container # C0146862	Gross Weight 813 40 g	<u>pH</u> <u>Container Type</u> 500 mL amber glass bottle	Preservative H2SO4, Sulfuric Acid	Mfg Lot	Mfg ID
C0146864	607.60 g	500 ml Clear Plastic Narrow	H2SO4, Sulfuric Acid		÷ .
C0146865	611 40 g	500 ml Clear Plastic Narrow	H2SO4, Sulfuric Acid		
C0146866	811.80 g	500 mL amber glass bottle	H2SO4, Sulfuric Acid		•
C0146867	621.70 g	500 ml Clear Plastic Narrow	H2SO4, Sulfuric Acid		
C0146868	616.30 g	500 ml Clear Plastic Narrow	H2SO4, Sulfuric Acid .		

	•			<u>Samples</u>
OI alome 2	Container	Matrix	Fraction	Sample

Sample ID	<u>Container</u>	<u>Matrix</u>	Fraction	<u>Sample</u>			<u>Date Sampled</u>	-	<u>Date Due</u>
L0007377-0001	-	LIQUID	Water	INFLUENT 2-1-06			02/01/2006		02/12/2006 ·
	C0146862				· .	•			•
	C0146864				,				
	C0146865								
L0007377-0002		LIQUID	Water	OUTFALL 2-1-06			02/01/2006		02/12/2006
2000.01.0002	00446966	2,40.		,		•			

C0146866 C0146867

C0146868

Date/Time

Login Reviewed By



CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

Exygen Research Sample Receiving • 3048 Research Drive • State College, PA 16801, USA T: 814.231.8032 • F: 814.231.1580 • exygenresearch.com

	<u>.</u>		
Page	of	-	

PROJECT INFO	RMATIO	N								•				AN	IALY	'SES	REC	QUE:	STED	
Sampler: DENNY LANE Please fill out this form completely to ensure cor						Project Manager (Name & E-mail Address):						+ Purchusping	1					-		
SAMPLI ExyLIMS# Clier		ALYS dentification	٦٢٥		Collection	Grab	Composite	Jumber of Containers	Specify Matrix	Comm	nante			Amount	ı u	NITEITE				
		- 2-1-04		Date -/-06	130 o	X	۲	3	WATER	Comm	ients		······································	1	1	1				
		2-1-06		1-06				3	WATER					17	1	1				-
														7	7	1				
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CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

Exygen Research Sample Receiving • 3048 Research Drive • State College, PA 16801, USA T: 814.231.8032 • F: 814.231.1580 • exygenresearch.com

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PROJECT INFORMATION								•		ΑN	IALY	SES	REQ	UES	ΤΕÞ	
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Attachment B

Data Summary, Severn Trent Laboratories (Pittsburgh)



STL Pittsburgh 301 Alpha Drive Pittsburgh, PA 15238

Tel: 412 963 7058 Fax: 412 963 2468 www.sti-inc.com

ANALYTICAL REPORT

PROJECT NO. EXYGEN RESEARCH

Exygen Research

Lot #: C6B040138

Jeff Biss

Exygen Research

SEVERN TRENT LABORATORIES, INC.

Christina M. Kovitch

Project Manager

February 14, 2006

Severn Trent Laboratories, Inc.





NELAC REPORTING:

The format and content of the attached report meets NELAC standards and guidelines except as noted in the narrative. The table below presents a summary of the certifications held by STL Pittsburgh. Our primary accreditation authority for the Non-potable water and Solid & Hazardous waste programs is Pennsylvania DEP. A more detailed parameter list is available upon request. Please ask your project manager for this information when required.

Certifying State Program	Certificate 8	Program Types	STL Pittsburgh
NFESC	NA	NAVY	X
USACE	NA	Corps of Engineers	X
US Dept of Agriculture	(#S-46425)	Foreign Soil Import Permit	X
Arkansas	(#03-022-1)	WW	X
		HW	X
California – nelac	04224CA	ww	X
		HW	X
Connecticut	(#PH-0688)	ww	X
		HW	X
Florida – nelac	(#E87660)	ww	X
		HW	X
Illinois – nelac	(#200005)	ww .	X
		HW	X
Kansas – nelac	(#E-10350)	ww	Χ .
		HW	X
Louisiana nelac	(#93200)	ww	X
		HW 1	<u> </u>
New Hampshire – nelac	(#203002)	ww	X
New Jersey – nelac	(PA-005)	+ ww	<u> </u>
New Jersey - Helac	(FA-000)	HW	x
New York - nelac	(#11182)	+ ww	x
New Tolk - Helac	(#11102)	HW	x
North Carolina	(#434)	ww	x
North Caronia .	(11-5-1)	HW	
North Dakota	R-075	ww	<u> </u>
North Banda	7, 67,0	HW	· X
Ohio Vap	(#CL0063)	ww	X
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l similation in the same of th	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	HW	X
South Carolina	(#89014001)	ww	X
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Utah - nelac	(STLP)	ww	X
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West Virginia	(#142)	w	<u> </u>
	(HW	_ X
Wisconsin	998027800	w	X
}	,	HW	X

The codes utilized for program types are described below:

HW Hazardous Waste certification

WW Non-potable Water and/or Wastewater certification

Laboratory has some form of certification under the specific program. Many states certify laboratories for specific parameters or tests within a category. The information in the table indicates the lab is certified in a general category of testing. Please contact the laboratory if parameter specific certification information is required.

CASE NARRATIVE EXYGEN RESEARCH

LOT # C6B040138

Sample Receiving:

STL Pittsburgh received samples on February 3, 2006. The cooler was received within the proper temperature range.

If project specific QC was not required for samples contained in this report, when batch QC was completed on these samples, anomalous results will be discussed below.

General Chemistry

The STL North Canton, OH laboratory performed the phosphorus analysis. All results are included in the report.

METHODS SUMMARY

C6B040138

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Nitrate-Nitrite	MCAWW 353.2	MCAWW 353.2
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Total phosphorus	MCAWW 365.2	MCAWW 365.2

References:

MCAWW

"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

C6B040138

WO # SAMPLE	# CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
HWWGC 001	INFLUENT 2-1-06	02/01/06	
HWWGE 002	OUTFALL 2-1-06	02/01/06	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrostvity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.



Exygen Contact: <u>Jeff</u>

C66B284691.38

Biss

Sample Submittal Please fax this form before sending samples.

Please fax this form before sending samples.
Please send samples to Exygen's shipping and receiving address:
3048 Research Drive, State College, PA 16801
T: 814.272.1039 • F: 814.272.1019

Administrative form2

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KKYGKN RESEARCH

Client Sample ID: INFLUENT 2-1-06

General Chemistry

Lot-Sample #...: C6B040138-001

Work Order #...: HWWGC

Date Sampled...: 02/01/06

Date Received..: 02/03/06

Matrix....: WATER

PARAMETER	RESULT	<u>RL</u>	UNITS	METHOI	0	PREPARATION- ANALYSIS DATE	PREP BATCH #
Ammonia Nitrogen	0.81	0.10	mg/L	MCANN	350.1	02/09-02/13/06	6040029
	-	Dilution Fact	or: 1	Analysis	Time: 11:58	MS Run #	: 6040015
Nitrate-Nitrite	ND	0.10	mg/L	MCAWW	353.2	02/10/06	6041109
		Dilution Fact	or: 1	Analysis	Time: 14:05	MS Run #	: 6041053
Total phosphorus	ND	0.10	mg/L	MCAWW	365.2	02/08/06	6039303
		Dilution Fact	or: 1	Analysis	Time: 00:00	MS Run #	: 6039204

KXYGKN RESEARCH

Client Sample ID: OUTFALL 2-1-06

General Chemistry

Lot-Sample #...: C6B040138-002

Work Order #...: HWWGE

PARAMETER	RESULT	RL	UNITS	METHOD)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Ammonia Nitrogen	0.93	0.10 Dilution Fact	mg/L or: 1	MCAWW Analysis	350.1 Time: 10:52	02/09-02/13/06 MS Run #	
Nitrate-Nitrite	ND	0.10 Dilution Fact	mg/L or: 1		353.2 Time: 14:11	02/10/06 MS Run #	6041109
Total phosphorus	ND	0.10 Dilution Fact	mg/L or: 1	MCAWW Analysis	365.2 Time: 00:00	02/08/06 MS Run #	6039303

METHOD BLANK REPORT

General Chemistry

Client Lot #...: C6B040138

Matrix.... WATER

PARAMETER Ammonia Nitrogen	RESULT ND	REPORTING LIMIT UNITS Work Order #: HW4N61AA 0.10 mg/L Dilution Factor: 1 Analysis Time: 10:26		PREPARATION- ANALYSIS DATE C6B090000-029 02/09-02/13/06	PREP BATCH # 6040029
Nitrate-Nitrite	ND	Work Order #: HW7AFlAA 0.10 mg/L Dilution Factor: 1 Analysis Time: 13:50	MB Lot-Sample #: MCAWW 353.2	C6B100000-109 02/10/06	6041109
Total phosphorus	ND	Work Order #: HW3HJ1AP 0.10 mg/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 365.2	A6B080000-303 02/08/06	6039303

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: C6B040138

Matrix.... WATER

	•	* !	i			
	PERCENT	RECOVERY	PREPARATION- PREP			
PARAMETER	RECOVERY	LIMITS METHOD	ANALYSIS DATE BATCH #			
Ammonia Nitroge	en	Work Order #: HW4N61AC LCS	Lot-Sample#: C6B090000-029			
	91	(90 - 110) MCAWW 350.1	02/09-02/13/06 6040029			
		Dilution Factor: 1 Analysis	Time: 10:25			
Nitrate-Nitrite	9	Work Order #: HW7AF1AC LCS	Lot-Sample#: C6B100000-109			
	102	(90 - 110) MCAWW 353.2	02/10/06 6041109			
		Dilution Factor: 1 Analysis	Time.: 13:48			
Total phosphore	າຣ	Work Order #: HW3HJ1AC LCS	Lot-Sample#: A6B080000-303			
	78	(53 - 134) MCAWW 365.2	02/08/06 6039303			
		Dilution Factor: 1 Analysis Time: 00:00				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: C6B040138

Matrix..... WATER

	SPIKE AMOUNT	MEASURI AMOUNT	UNITS		METHOD LCS Lot-Sample	PREPARATION- ANALYSIS DATE #: C6B090000-0	
	2.00	1.82	mg/L Dilution Factor	91		02/09-02/13/06	
Nitrate-Nitri	te 4.00	4.09	Work Order #: mg/L Dilution Factor	102	Analysis Time: 13	02/10/06	09 6041109
Total phospho		2.91	Work Order #: mg/L Dilution Factor	78	IAC LCS Lot-Sample MCAWW 365.2 Analysis Time: 00:	02/08/06	03 6039303

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: C6B040138 Matrix....: WATER

PARAMETER	PERCENT RECOVERY	PEC		3		RPD LIMITS			-	PREPARATION ANALYSIS DA	
Ammonia Nitr	ogen	,		WO#:	HWF4	Klej-Ms/	HWF4K1	EK-MSD	MS	Lot-Sample #:	C6A270333-003
	88 N	(90	-	110)		,	MCAWW	350.1		02/09-02/13	/06 6040029
	109	(90	-	110)	19	(0-20)	MCAWW	350.1		02/09-02/13	/06 6040029
				Dilut	ion Fa	ctor: 1				•	
				Analy	sis Ti	me: 10:4	11			•	
				MS Ru	n #	: 6040	0015				r
Nitrate-Nitr	ite	٠		WO#:	HW1R	71AF-MS/	'HW1R71	AG-MSD	MS	Lot-Sample #:	C6B070316-001
	104			110)			MCAWW			02/10/06	
	100	(90	_	110)	2.3	(0-20)				02/10/06	6041109
				Dilut	ion Fa	ctor: 1				•	
				Analy	sis Ti	me: 13:5	57		,		
		,		_		: 6041					·
Total phosph	orus	•		WO#:	HW06	G1AE-MS/	HW06G1	AF-MSD	MS	Lot-Sample #:	A6B070223-001
	174	(10	_	199)			MCAWW	365.2		02/08/06	6039303
	165	(10	_	199)	2.4	(0-46)	MCAWW	365.2		02/08/06	6039303
•				Dilut	ion Fa	ctor: 1					•
	•			Analy	sis Ti	me: 00:0	00			•	
				MS Ru	n #	: 603	9204			. *	
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NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

ATTACHMENT 4

WATER SAMPLING RESULTS – FEBRUARY 15, 2006 NEASE CHEMICAL SITE, SALEM, OHIO



Analytical Report

Rütgers Organics Corporation

Exygen Research Project:

L7529

Testing Laboratory

Exygen Research 3058 Research Drive State College, PA 16801

Requester

Dr. Rainer Domalski Rutgers Organics Corporation 201 Struble Road State College, PA 16801



1 Introduction

Results are reported for the analysis of samples taken on 2/15/06. The samples were received from Rutgers Organics Corporation. The samples are part of the Rütgers Organics Corporation Salem Ohio Site Project.

2 Sample Receipt

The sample shipment was logged in and given a unique Exygen laboratory identification number. All samples were stored refrigerated at 4°C from time of receipt until analysis. A copy of the custody documents, and sample login reports are presented in Attachment A. Listed below is the sample receipt information for the project received.

The samples were received on 2/16/06 in two sample coolers. The sample coolers were within acceptable temperature ranges. The summa canisters were received in a cardboard shipping box at ambient temperature.

Sample Identification	Exygen ID	Date Sampled	Sample Matrix	Requested Analysis
Influent 2-15-06	L7529-1	2/15/06	Water	MPK, PH, TDS, TSS
LGAC 2-3-2-15-06	L7529-2	2/15/06	Water	MPK, PH, TDS, TSS, VOC
			Water	NH3, VOC, BOD, PH, TSS, TDS, COD, TOC, O+G,
Outfall 2-15-06	L7529-3	2/15/06		SVOC, PEST, CN-FREE, MPK, METALS
TRIP BLANK	L7529-4	12/27/05	Water	VOC
AGAC-1-2-2-15-06	L7529-5	2/15/06	Air	VAPOR VOC
AGAC-F-2-15-06	L7529-6	2/15/06	Air	VAPOR VOC

3 Sample Analysis

3.1 Analysis

Listed in Table 1 are the parameters, methods and laboratory performing each of the analysis.

Table 1

Parameter	Method	Laboratory
PH	EPA 150.1	Severn Trent Laboratories (Pittsburgh)
total dissolved solids (TDS)	EPA 160.1	Severn Trent Laboratones (North Canton)
total suspended solids (TSS)	EPA 160.2	Severn Trent Laboratories (North Canton)
Volatile Organics (VOC)	EPA 8260B	Severn Trent Laboratories (Pittsburgh)
Ammonia-Nitrogen (NH3)	EPA 350.1	Severn Trent Laboratories (Pittsburgh)
Biochemical Oxygen Demand (BOD)	SM 5210	Todd Giddings and Associates
Chemical Oxygen Demand (COD)	EPA 410.4	Severn Trent Laboratories (North Canton)
Total Organic Carbon (TOC)	EPA 415.1	Severn Trent Laboratories (Pittsburgh)
Oil and Grease (O+G)	EPA 1664A	Severn Trent Laboratories (Pittsburgh)
Semivolatile Organics (SVOC)	EPA 8270C	Exygen Research
Pesticides (PEST)	EPA 8081A	Severn Trent Laboratones (Pittsburgh)
Free Cyanide (CN-FREE)	SM18 4500-CN-I	Severn Trent Laboratories (North Canton)
mirex, photomirex, kepone (MPK)	SOP 6.2	Exygen Research
Metals Analysis (METALS)	EPA 6020/7470	Severn Trent Laboratories (Pittsburgh)
Volatile Organics by TO14	TO14	Severn Trent Laboratories (Knoxville)

3.2 Holding Times

All holding times were met for the requested analysis.

3.3 Quality Control

Quality control included those parameters prescribed by each method or SOP.

3.4 Sample Related Comments

Any problems encountered during the analysis of these samples are listed in the narrative for each data package.

4 Data Summary

Results are reported in six different attachments. The analysis completed by Exygen Research is reported in Attachment B. The analysis completed by Severn Trent Labs (Pittsburgh) is reported in Attachment C. The analysis completed by Severn Trent Labs (North Canton) is reported in Attachment D. The analysis completed by Severn Trent Labs (Knoxville) is reported in Attachment E. The analysis completed by Todd Giddings and Associates is reported in Attachment F.

5 Data/Sample Retention

Samples are disposed of one month after the report is issued unless otherwise specified. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by Exygen Research. Hardcopy data is stored for a minimum of five years.

6 Attachments

- 6.1 Attachment A: Chain-of-Custody
- 6.2 Attachment B: Data Summary, Exygen Research
- 6.3 Attachment C. Data Summary, Severn Trent Laboratories (Pittsburgh)
- 6.4 Attachment D: Data Summary, Severn Trent Laboratories (North Canton)
- 6.5 Attachment E: Data Summary, Severn Trent Laboratories (Knoxville)
- 6.6 Attachment F: Data Summary, Todd Giddings and Associates

7 Signatures

Charles Simons, Laboratory Manager

Date



CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

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Page 2 of 2

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Page 1 of 2

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Fax:			- ,	P.O.	#:							İ	•	9	ł	
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RUTGERS ORGANICS CORPORATION/EHS DEPT.

201 STRUBLE ROAD

STATE COLLEGE, PA 16801

ACCOUNT: 155

Contact RAINER DOMALSKI

Date Received:

16-Feb-06

Date Reported:

23-Feb-06

Invoice Number: 136043

Date Collected: 15-Feb-06

Client ID INFLUENT 2-15-06

Lab ID: L7529-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTITATION	TEST METHOD	TEST DATE	ANALYST
PESTICIDE ANALYSIS						
ESTICIDE ANALISTS EPHOTOMIREX STREX	ng/p ng/p	U 0.042 U 0.006 0 339	0.042 0.006 0.002	SOP 6.2 SOP 6.2 SOP 6.2	22-Feb-06 22-Feb-06 22-Feb-06	CS CS CS
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RUTGERS ORGANICS CORPORATION/EHS DEPT 201 STRUBLE ROAD STATE COLLEGE, PA 16801

ACCOUNT: 155

Contact: RAINER DOMALSKI

Date Received

16-Feb-06

Date Reported

23-Feb-06

Invoice Number

136043

Date Collected. 15-Feb-06

Client ID- LGAC 2-3-2-15-06

Lab ID. L7529-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTITATION	TEST METHOD	TEST DATE	ANALYST
PESTICIDE ANALYSIS KEPONE	ug/L	U 0.042	0.042	SOP 6 2	22-Feb-06	cs
PHOTOMIREX MIREX	ug/L ug/L	U 0.006 U 0.002	0.006 0.002	SOP 6.2 SOP 6 2	22-Feb-06 22-Feb-06	CS CS
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						•
•					<i>;</i>	,
	•					







RUTGERS ORGANICS CORPORATION/EHS DEPT

201 STRUBLE ROAD

STATE COLLEGE, PA 16801

ACCOUNT: 155

Contact. RAINER DOMALSKI

Date Received:

16-Feb-06

Date Reported.

23-Feb-06

Invoice Number -

136043

Date Collected. 15-Feb-06

Client ID · OUTFALL 2-15-06

Lab ID: L7529-3

			LIMIT			
ARAMETER	UNITS	RESULT	OP	TEST METHOD	TEST DATE	ANALYST
		1,000	30.00			
STICIDE ANALYSIS	•					
EPONE	uģ/L	U 0.042	0 042	SOP 6.2	22-Feb-06	CS
HOTOMIREX	ug/L	U 0 006	0.006	SOP 6.2	22-Feb-06	CS ·
REX	ug/L	บ 0.002	0 002	SOP 6.2	22-Feb-06	C\$
MI-VOLATILE ANALYSIS						
THRACENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
ENZO (A) ANTHRACENE	. ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
NZO (K) FLUORANTHENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
4-BENZOFLUORANTHENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
ENZO (B) FLUORANTHENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP.
ENZO(G, H, I) PERYLENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
enzo (a) pyrene	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
IRYSENE	ug/L	< 10	. 10	EPA 8270C	22-Feb-06	CP.
BENZ (A, H) ANTHRACENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
LUORENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
DENO(1,2,3-CD)PYRENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
APHTHALENE	. ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
ENANTHRENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
RENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
fENOL .	ug/L	< 10	10 .	EPA 8270C	22-Feb-06	CP
METHYLPHENOL	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
3-DICHLOROBENZENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	. CP
. 4 - DICHLOROBENZENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
, 2 - DICHLOROBENZENE	. ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
METHYL PHTHALATE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
JTYLBENZYL PHTHALATE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
I-N-BUTYL PHTHALATE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
-methylnaphthalene	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP
, 4 - DICHLORONITROBENZENE	ug/L	< 10	10	EPA 8270C	22-Feb-06	CP



KKYGEN RESKARCH

Client Sample ID: L-7529-1

General Chemistry

Lot-Sample #...: C6B170225-001 Work Order #...: HXM98 Natrix.....: WATE

 PARAMETER
 RESULT
 RL
 UNITS
 METHOD
 ANALYSIS
 DATE
 BATCH #

 pH
 7.0
 0.10
 No Units
 5W846
 9040
 02/17/06
 6048409

 Dilution Factor: 1
 Analysis Time.: 15:41
 MS Run #......: 6048240

KKYUKN RESEARCH

Client Sample ID: L-7529-2

GC/MS Volatiles

 Lot-Sample #...: C6B170225-002
 Work Order #...: HXNAN1AC
 Matrix.....: WATER

 Date Sampled...: 02/15/06
 Date Received..: 02/17/06
 MS Rum #.....: 6055062

Dilution Factor: 1

Method.....: 5W846 8260B

		REPORTING	•
PARAMETER	RESULT	LIMIT	UNITS
p-Isopropyltoluene	ND	5.0	ug/L
m-Xylene & p-Xylene	ND	10	ug/L
o-Xylene	ND	5.0	ug/L
Bromobenzene	NTD -	5.0	ug/L
n-Butylbenzene	ND	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
2-Chlorotoluene	ND	5.0	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	. ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
Acetone	ND	20	ug/L
Benzene	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND .	5.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chloroethane	ND ,	5.0	ug/L
Chloroform	אַס פֿאַ	5.0	ug/L
Chloromethane	5.3	5.0	ug/L
Dibromochloromethane	ND .	5.0	ug/L
1,2-Dibromoethane	ND	5.0	na\r
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzéne)XID	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L

(Continued on next page)

KKYGKN RESKARCH

Client Sample ID: L-7529-2

GC/MS Volatiles

Lot-Sample #: C6B170225-00	02 Work Order #	: HXNANLAC	Matrix: WATER
		REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
1,1-Dichloroethene	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND	5.0	ug/L
trans-1,2-Dichloroethene	ND	5.0	ug/L
1,2-Dichloropropane	ND	5.0	na\r
cis-1,3-Dichloropropene	ИD	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Ethylbenzen e	ND .	5.0	ug/L
Isopropylbenzene	ND	5.0	ug/L
Methylene chloride	ND	5.0	ug/L
Styrene	ND	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
1,1,1-Trichloroethane	מא	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	ND	5.0	ug/L
Toluene	ND	5.0	ug/L
Vinyl chloride	ND	5.0	ug/L
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	<u>.</u> -
1,2-Dichloroethane-d4	83	(70 - 125)	·
Toluene-d8	97	(80 - 120))
4-Bromofluorobenzene	86	(75 - 120)	,
Dibromofluoromethane	89	(80 - 120)	

Client Sample ID: L-7529-2

General Chemistry

Lot-Sample #...: C6B170225-002 Work Order #...: HXNAN

Date Sampled...: 02/15/06

Date Received..: 02/17/06

Matrix..... WATER

PARAMETER

UNITS RL

METHOD

PREPARATION-ANALYSIS DATE BATCH #

PREP

pĦ

0.10 No Units SW846 9040

02/17/06

6048409

Dilution Factor: 1

Analysis Time..: 15:43 MS Run #.....: 6048240

Client Sample ID: L-7529-3

GC/MS Volatiles

Lot-Sample #...: C6B170225-003 Work Order #...: HXNCH1AX Hatrix....: WATER
Date Sampled...: 02/15/06 Date Received..: 02/17/06 MS Run #....: 6055062

Prep Date....: 02/24/06 Analysis Date..: 02/24/06 Prep Batch #...: 6055113 Analysis Time..: 12:35

Dilution Factor: 1

Method..... SW846 8260B

		REPORTIN	_
PARAMETER	RESULT	LIMIT	UNITS
p-Isopropyltoluene	ND	5.0	ug/L
m-Xylene & p-Xylene	ND ·	10	ug/L
o-Xylene	ND	5.0	ug/L
Bromobenzene	ND.	5.0	ug/L
n-Butylbenzene	מא	5.0	ug/L
n-Propylbenzene	ND ·	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND .	5.0	ug/L
2-Chlorotoluene	ND	5.0	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	ug/L
Bromochloromethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
Acetone	ND	20	ug/L
Benzene	ND	5.0	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	מא	5.0	ug/L
Bromomethane	ND	5.0	ug/L
2-Butanone	ND .	5.0	ug/L
Carbon tetrachloride	· ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chloroethane	ND	5.0	ug/L
Chloroform	ND	5.0	ug/L
Chloromethane	17 .	5.0	ug/L
Dibromochloromethane	ND	5.0	ug/L
1,2-Dibromoethane	ND	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ND	5.0	ug/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	na\r

(Continued on next page)

KYYGEN RESEARCH

Client Sample ID: L-7529-3

GC/MS Volatiles

Lot-Sample #...: C6B170225-003 Work Order #...: HXNCH1AX Matrix..... WATER

		REPORTING	•
PARAMETER	RESULT	LIMIT	UNITS
1,1-Dichloroethene	ND	5.0	ug/L
cis-1,2-Dichloroethene	ND .	5.0	ug/L
trans-1,2-Dichloroethene	ND	5.0	ug/L '
1,2-Dichloropropane	ND	5.0	ug/L
cis-1,3-Dichloropropene	ND	5.0	ug/L
trans-1,3-Dichloropropene	ND	5.0	ug/L
Ethylbenzene	ND	5.0	ug/L
Isopropylbenzene	ND .	5.0	ug/L
Methylene chloride	ND	5.0	ug/L
Styrene	ND .	5.0	ug/L
1,1,2,2-Tetrachloroethane	ND .	5.0	ug/L
Tetrachloroethene	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	5.0	ug/L
1,1,2-Trichloroethane	ND	5.0	ug/L
Trichloroethene	ND	5.0	ug/L
Trichlorofluoromethane	מא	5.0	ug/L
Toluene	ND	5.0	ug/L
Vinyl chloride	ND	5.0	ug/L
	PERCENT	RBCOVERY	
SURROGATE	RECOVERY	LIMITS	<u></u>
1,2-Dichloroethane-d4	82	(70 - 125)	1
Toluene-d8	98	(80 - 120))
4-Bromofluorobenzene	87	(75 - 120)	
Dibromofluoromethane	89	(80 - 120))

KKYGEN RESEARCH

Client Sample ID: L-7529-3

GC Semivolatiles

Lot-Sample #: C6B170225-003 Date Sampled: 02/15/06 Prep Date: 02/21/06 Prep Batch #: 6052513 Dilution Factor: 1.01	Work Order #: Date Received: Analysis Date: Analysis Time:	02/17/06 02/24/06	Matrix: WATER MS Run #:
	Method:	SW846 B081	A
		REPORTING	•
PARAMETER	RESULT	LIMIT	UNITS
Methoxychlor	ND	0.10	ug/L
	PERCENT	RECOVERY	
SURROGATE	RECOVERY	LIMITS	
Tetrachloro-m-xylene	89	(39 - 130)	
Decachlorobiphenyl	104	(10 - 147)	

KKYGEN RESEARCH

Client Sample ID: L-7529-3

TOTAL Metals

Lot-Sample #...: C6B170225-003 Matrix.....: WATE

-		6.89.00.00.00.00.00.00.00.00.00.00.00.00.00	-			DOUBLE DAMEAN	MORY
		REPORTING	-		_	PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOI	<u> </u>	ANALYSIS DATE	ORDER #
Prep Batch #.	: 6052118						
Silver	ND	0.0010	mg/L	SWB46	6020	02/21-02/25/06	HXNCH1AH
		Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	: 6052060
Aluminum	0.046	0.030	mg/L	SW846	6020	02/21-02/25/06	HXNCHLAJ
	•	Dilution Pact	or: 1	Analysis	Time: 18:15	MS Run #	: 6052060
Arsenic	0.0044	0.0010	tng/L	SW846	6020	02/21-02/25/06	HXNCHLAK
		Dilution Pact	or: 1	Analysis	Time: 18:15	MS Run #	: 6052060
Beryllium	ND	0.0010	mg/L	SW846	6020	02/21-02/25/06	HXNCHIAL
-		Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	.: 6052060
Cadmium	ND	0.0010	mg/L	SW846	6020	02/21-02/25/06	HXNCHLAM
-	•	Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	: 6052060
Chromium	0.0011 B	0.0020	mg/L	SW846	6020	02/21-02/25/06	HANCHLAN
٠.		Dilution Pact	or; 1	Analysis	Time: 18:15	MS Run #	.: 6052060
Copper	0.00047 B	0.0020	mg/L	SWB46	6020	02/21-02/25/06	HANCHIAP
 ,		Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	.: 6052060
Iron	0.13	0.050	mg/L	SWB46	6020	02/21-02/25/06	HXNCHLAQ
		Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	.: 6052060
Nickel	0.0012	0.0010	mg/L	SWB46	6020	02/21-02/25/06	HXNCHLAR
		Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	: 6052060
Lead	ND	0.0010	mg/L	SW846	6020	02/21-02/25/06	HXNCHLAT
		Dilution Pact	or: 1	Analysis	Time: 18:15	MS Rum #	: 6052060
Antimony	0.00062 B	0.0020	mg/L	SWB46	6020	02/21-02/25/06	HXNCHLAU
•		Dilution Fact	or: 1	Analysis	Time: 18:15	MS Run #	.: 6052060
Thallium	ND	0.0010	mg/L	SW846	6020	02/21-02/25/06	HXNCHLAV
•		Dilution Pact	or: 1	Analysis	Time: 18:15	MS Run #	.: 6052060

(Continued on next page)

KXYGKN RESKARCH

Client Sample ID: L-7529-3

TOTAL Metals

Lot-Sample #...: C6B170225-003

Matrix....: WATER

PARAMETER	RESULT	REPORTIN LIMIT	G UNITS	METHO	3	PREPARATION- ANALYSIS DATE	WORK ORDER #	
Zinc	0.00087 B	0.0050	mg/L	SW846		02/21-02/25/06		
		Dilution Fac		Analysis Time: 18:1		MS Run #		
Prep Batch	⊭: 6055033						,	
Mercury	ND	0.20	ug/L	SW846	7470A	02/24/06	HXNCH1A7	
•		Dilution Fac	tor: 1	Analysis	Time: 09:53	MS Run #	: 6055017	
NOTE(S):		•						

B Estimated result. Result is less than RL.

Client Sample ID: L-7529-3

General Chemistry

Lot-Sample #...: C6B170225-003

Work Order #...: HXNCH

Date Sampled...: 02/15/06

Date Received..: 02/17/06

Matrix..... WATER

					•	PREPARATION-	PREP
PARAMETER	RESULT	RL_	UNITS	METHO	D	ANALYSIS DATE	BATCH #
рн	8.4	0.10	No Units	SW846	9040	02/17/06	6048409
	•	Dilution Fact	or: 1	Analysis	Time: 15:44	MS Run #	: 6048240
Ammonia Nitrogen	0.70	0.10	mg/L	MCANW	350.1	02/21-02/22/06	6049031
	-	Dilution Fact	or: 1	Analysis	Time: 07:23	MS Run #,	: 6049016
Chemical Oxygen Demand (COD)	ממ .	20.0	mg/L	MCAWW	410.4	02/21/06	6052195
		Dilution Pact	ori 1	Analysis	Time: 00:00	MS Run #	: 6052129
Cyanide (Free)	ND	0.010	mg/L	SM18	4500-CN-I	02/21/06	6052288
		Dilution Pact	or: 1	Analysis	Time: 00:00	MS Run #	: 6052201
Oil & Grease (HEM)	ND	9.6	mg/L			02/23-02/24/06	
	•	Dilution Fact	or: 1.92	Analysis	Time: 00:00	MS Rum #	:
Total Organic Carbon (TOC)	ממ	1.0	mg/L	SW846	9060	03/02/06	6061265
		Dilution Fact	or: 1	Analysis	Time: 08:02	. MS Run #	: 6061198

Client Sample ID: L-7529-4

GC/MS Volatiles

Lot-Sample #...: C6B170225-004 Work Order #...: HXNE81AA Matrix.....: WATER
Date Sampled...: 01/24/06 Date Received..: 02/17/06 MS Rum #.....: 6055062

Prep Date....: 02/24/06 Analysis Date..: 02/24/06 Prep Batch #...: 6055113 Analysis Time..: 13:04

Dilution Factor: 1

Method....: SW846 8260B

•	-	REPORTING	· }
PARAMETER	RESULT	LIMIT	UNITS
p-Isopropyltoluene	ND	5.0	ug/L
m-Xylene & p-Xylene	ND	10	ug/L
o-Xylene	ND	5.0	ug/L
Bromobenzene	ND	5.0	ug/L
n-Butylbenzene	מא	5.0	ug/L
n-Propylbenzene	ND	5.0	ug/L
sec-Butylbenzene	ND	5.0	ug/L
tert-Butylbenzene	ND	5.0	ug/L
2-Chlorotoluene	ND	5.0	ug/L
1,2,3-Trichloropropane	ND	5.0	ug/L
1,2,4-Trimethylbenzene	ND	5.0	ug/L
4-Chlorotoluene	ND	5.0	ug/L
1,3-Dichloropropane	ND	5.0	ug/L
1,1,1,2-Tetrachloroethane	ND	-5.0	ug/L
1,3,5-Trimethylbenzene	ND	5.0	ug/L
2,2-Dichloropropane	ND	5.0	na\r
Bromochloromethane	ND	5.0	ug/L
Dibromomethane	ND	5.0	ug/L
1,1-Dichloropropene	ND	5.0	ug/L
Acetone	ND	20	ug/L
Benzene	ND ,	5.D	ug/L
Bromodichloromethane	ND	5.0	ug/L
Bromoform	ND	5.0	ug/L
Bromomethane	ND	5.0	ug/L
2-Butanone	ND	5.0	ug/L
Carbon tetrachloride	ND	5.0	ug/L
Chlorobenzene	ND	5.0	ug/L
Chloroethane	ND	5.0	ug/L
Chloroform	MD ,	5.0	ug/L
Chloromethane	10	5.0	ug/L
Dibromochloromethane	ND -	5.0	ug/L
1,2-Dibromoethane	ND .	5.0	ug/L
1,3-Dichlorobenzene	ND	5.0	ug/L
1,4-Dichlorobenzene	ND	5.0	ug/L
1,2-Dichlorobenzene	ND	5.0	ug/L
Dichlorodifluoromethane	ир .	5.0	ng/L
1,1-Dichloroethane	ND	5.0	ug/L
1,2-Dichloroethane	ND	5.0	ug/L

(Continued on next page)

Client Sample ID: L-7529-4

GC/MS Volatiles

Lot-Sample #: C6B170225-00	4 Work Order	: HXNE81AA	Matrix.	WATER
·	,	REPORTING	,	• -
PARAMETER	RESULT	LIMIT	UNITS	· .
1,1-Dichloroethene	ND	5.0	ug/L	<u> </u>
cis-1,2-Dichloroethene	ND	5.0	ug/L	·.
trans-1,2-Dichloroethene	ND	5.0	ug/L	
1,2-Dichloropropane	ND	5.0	ug/L	× .
cis-1,3-Dichloropropene	ND	5.0	ug/L	
trans-1,3-Dichloropropene	ND	5.0	ug/L	4 1
Ethylbenzene	ND	5.0	ug/L	
Isopropylbenzene	ND	5.0	ug/L	
Methylene chloride	ND	5.0	ug/L	•
Styrene	ND	5.0	ug/L	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	•
Tetrachloroethene	ND	5.0	ug/L	
1,1,1-Trichloroethane	ND	5.0	ug/L	
1,1,2-Trichloroethane	ND	5.0	ug/L	
Trichloroethene	ND	5.0	ug/L	
Trichlorofluoromethane	. ND .	5.0	ug/L	
Toluene	ND	5.0	ug/L	
Vinyl chloride	ND	5.0	ug/L	
•	PERCENT	RECOVERY		
SURROGATE	RECOVERY	LIMITS	_	
1,2-Dichloroethane-d4	85	(70 - 125	i)	
Toluene-d8	97	(80 - 120)	
4-Bromofluorobenzene	87	(75 - 120)	
Dibromofluoromethane	90	(.80 - 120)	

(Continued on next page)

METHOD BLAMK REPORT

				asti	ME AOJSE	' 29	
MATER		Matrix	A	ALDTEXH	:# Tot	Nork Or	Client Lot # CGB170225
					•	ε	MR POR-REMDJE #: CERTOOO-17
8T:60	: sari)	Analysis 7			:92		20,40,00 - 4400 212-1206
				CTTCCAO	:···# 122	ned gaza	Analysis Date: 02/24/06 Dilution Factor: 1
•						,	
,			-	EPORTING	เห		•
		WELHOL	STINO			RESOLT	RITIMARAG
•		918MS	7/5n			CIN	втопореджене
		978MS	7/5n			CIN	втомосьтот
	8260B		7/6n	a.		CIN.	u-Butylensene
	8260B		7/5n	0.		. מא	sec-Butylbenzene
	E0928		7/5n	0.		QN.	rert-Butylbenzene
	8260B		7/5n	0.		CIN CIN	S-Chlorotoluene
	8260B		7/5n	0.		CIX	4-Chlorotoluene
	8260B		7/6n	0.		ON.	Dibromomethane
	8260B	-	7/5n	0.		CIN	1,3-Dichloropropane
	8360B		7/5n	0.		CIN	2,2-Dichloropropane
	8260B		7/5n	0.		CIN	1,1-Dichloropropene
	8260B		7/5n	0.		QN.	b-Isopropylene
	8260B		7/5n	9.		CIN CIN	n-Propy bear and not be
	8260B	_	I/Sn	0.		CIN CIN	1,1,1,2-Tetrachloroethane
	E0928	_	7/6n	0.		CIN	1,2,3-Trichloropropane
	82608		7/5n	0.		CIN	1,2,4-Trimethylbensene
	8260B		7/5n	0.		CIN	1,3,5-Trimethylbenzene
	8260B		7/5n	0.		CIN	o-Xylene t n-Xvlene
	8260B		r/Sn		T	QN	w-xhrene & p-xylene
	8260B 8260B	_	7/5n		3(QN CIN	Acetone
•	8260B		7/5n	0.		CIN	Bromodichloromethane
	8560B		7/5n 7/6n	0.		QN CN	Bromotorm
	8260B		7/5n	0.		QN.	Вгомометрале
•	8260B		7/5n	0.		_ CN	2-Butanone
	8260B	-	7/5n	0 -		ŒИ	Carbon tetrachloride
	80928		7/5n	0.		ON .	Chlorobenzene
	8260B	978MS	7/5n	0.		ND	Ср1окоетрале
	8260B	978MS	7/5n	0.		. QN	Chloroform
	8560B	978MS	n d\ Γ	0.	9	ŒИ	С <i>р</i> уохоше сраие
	8560B	978MS	T/Sn	0.	S	ПD	Dibromochloromethane
	8260B		7/5n	0.		CIN	1,2-Dibromoethane
	8260B	=	7/5n	0.		ИD	1,3-Dichlorobenzene
	8260B	_	7/5n	0.		, CIN	1,4-Dichlorobensene
	8260B		7/5n	ŷ.		CIN .	1,2-Dichlorobenzene
	8260B		¶/Sn	٥.		CIN	Dichlorodifluoromethane
	8260B		7/5n	o.		QIV.	1,1-Dichloroethane
·	8260B	,	7/5n	<u>o</u> .		CIN	1,2-Dichloroethane
	8260B		7/5n	0.		CN	1,1-Dichloroethene
	82608		7/5n	0.		QN	cis-1,2-Dichloroethene
*	8260B	Q-BOMS	na\r	٥.	· c	QN .	trans-1,2-Dichloroethene

GC/MS Volatiles

Client Lot #: C6B170225	Work Order	#: HX3TG	Matrix: WATE		
		REPORTI	NG		
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	מא	5.0	ug/L	SW846 8260B	
Ethylbenzene	ND	5.0	ug/L	SW846 8260B	
Isopropylbenzene	ND.	5.0	ug/L	SW846 8260B	
Methylene chloride	ND	5.0	ug/L	SW846 8260B	
Styrene	ND	5.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 B260B	
Trichloroethene	ND	5.0	ug/L	SW846 8260B	
Trichlorofluoromethane	ND	5.0	ug/L	SW846 8260B	
Toluene	ND	5.0	ug/L	SW846 8260B	
Vinyl chloride	ND	5.0	ug/L	SW846 8260B	
	PERCENT	RECOVER	Y		
SURROGATE	RECOVERY	LIMITS			
1,2-Dichloroethane-d4	84	(70 - 1	25)	•	
Toluene-dB	97	(80 - 1	20)		
4-Bromofluorobenzene	87	(75 - 1	20)		
Dibromofluoromethane	89	(80 - 1	20)		

Calculations are performed before rounding to avoid round-off errors in calculated results.

GC Semivolatiles

Client Lot #...: C6B170225

Work Order # ...: HXVHR1AA

Matrix....: WATER

MB Lot-Sample #: C6B210000-513

Prep Date....: 02/21/06

Analysis Time..: 23:40

Analysis Date..: 02/24/06

Dilution Factor: 1

Prep Batch #...: 6052513

REPORTING

PARAMETER Methoxychlor RESULT LIMIT UNITS ug/L

ND

0.10

RECOVERY

SW846 8081A

SURROGATE Tetrachloro-m-xylene Decachlorobiphenyl

PERCENT RECOVERY 90 105

LIMITS (39 - 130)(10 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TOTAL Metals

Client Lot #	: C6B170225	•	Matr	ix WAT	ER
PARAMETER	RESULT	REPORTING LIMIT UNITS ME	THOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
		118 Prep Batch #: 6052			
Aluminum	ND	0.030 mg/L SW Dilution Pactor: 1 Analysis Time: 18:03	846 6020	02/21-02/25/06	HXRVR1AC
Antimony	ND	0.0020 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	846 6020	02/21-02/25/06	HXRVRlam
Arsenic	ИD	0.0010 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	846 6020	02/21-02/25/06	HXRVRLAD .
Beryllium	ND .	0.0010 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	846 6020	02/21-02/25/06	HXRVR1AE
Cadmium	MD	0.0010 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	846 6020	02/21-02/25/06	HXRVR1AF
Chromium	ND .	0.0020 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	7846 602 0	02/21-02/25/06	HXRVR1AG
Copper	ND .	0.0020 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	7846 6020	02/21-02/25/06	HXRVR1AH
Iron	ND	0.050 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	7846 6020	02/21-02/25/06	HXRVR1AJ
Lead	ND	0.0010 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	7846 6020	02/21-02/25/06	HXRVR1AL
Nickel .	ND	0.0010 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	7846 6020	02/21-02/25/06	HXRVRlak
Silver	י סא	0.0010 mg/L SW Dilution Factor: 1 Analysis Time: 18:03	7846 6020	02/21-02/25/06	HXRVR1AA

(Continued on next page)

TOTAL Metals

Client Lot #...: C6B170225

Matrix....: WATER

02/24/06

HX3L21AA

PARAMETER Thallium	RESULT ND	REPORTING LIMIT UNITS 0.0010 mg/L	METHOD SW846 5020	PREPARATION- WORK ANALYSIS DATE ORDER # 02/21-02/25/06 HXRVRIAN
*		Dilution Factor: 1 Analysis Time: 18:03		
Zinc	ND	0.0050 mg/L Dilution Factor: 1 Analysis Time: 18:03	SW846 6020	02/21-02/25/06 HXRVR1AP

MB Lot-Sample #: C6B240000-033 Prep Batch #...: 6055033

Mercury ND 0.20 ug/L SW846 7470A

Dilution Factor: 1

Analysis Time..: 09:24

Calculations are performed before rounding to avoid round-off errors in calculated results.

NOTE (S):

General Chemistry

Matrix....: WATER

Client Lot #...: C6B170225

		REPORTING	3		PREPARATION-	PREP
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	BATCH #
Ammonia Nitrogen		Work Order	#: HXV471AA	MB Lot-Sample #:	C6B180000-031	•
	ND	0.10	mg/L	MCAWW 350.1	02/21-02/22/06	6049031
		Dilution Fact	or: 1	•		-
		Analysis Time	06:45			·
Chemical Oxygen Demand (COD)		Work Order	#: HXR9GlAA	MB Lot-Sample #:	A6B210000-195	. ,
	ND	20.0	mg/L	MCAWW 410.4	02/21/06	6052195
,		Dilution Pact	or: 1			
		Analysis Time	00:00	-		-
Cyanide (Free)		Work Order	#: HXTNKLAA	MB Lot-Sample #:	A6B210000-288	
	ND	0.010	mg/L	SM18 4500-CN-I	02/21/06	6052288
		Dilution Fact	or: 1			
		Analysis Time	00:00			
Oil & Grease (HEM)		Work Order	#: HX2F41AA	MB Lot-Sample #:	C6B230000-436	
•	ND	5.0	mg/L	CFR136A 1664A HEM	02/23-02/24/06	6054436
		Dilution Pact	or: 1		•	
		Analysis Time	·: 00:00	,		
Total Organic Carb	on	Work Order	#: HOGV41AA	MB Lot-Sample #:	C6C020000-265	
•	ND	1.0	mg/L	SW846 9060	03/02/06	6061265
		Dilution Pact	or: 1			
		Analysis Time	06:58			

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client Sample ID: C0151101 L7529-1

General Chemistry

Lot-Sample #...: A6B170229-001 Work Order #...: HXNA3 Matrix.....: WG

Date Sampled...: 02/15/06 13:00 Date Received..: 02/17/06

PREPARATION-PREP PARAMETER RESULT ANALYSIS DATE BATCH # METHOD 10 MCAWW 160.1 02/21-02/22/06 6052269 Total Dissolved 470 mg/L Solids Dilution Factor: 1 Total Suspended 22 4.0 mg/L MCAWW 160.2 02/20/06 6051262

Dilution Factor 1

Solids

Client Sample ID: C0151111 L7529-2

General Chemistry

Lot-Sample #...: A6B170229-002 Work Order #...: HXNCJ Matrix.....: WG

Date Sampled...: 02/15/06 13:00 Date Received..: 02/17/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	440	10	mg/L	MCAWW 160.1	02/21-02/22/06	6052269
•	Di	lution Fac	ctor: 1			
Total Suspended Solids	ND	4.0	mg/L	MCAWW 160.2	02/20/06	6051262
	Di	lution Fac	ctor: 1	1		

Client Sample ID: C0151126 L7529-3

General Chemistry

Lot-Sample #...: A6B170229-003 Work Order #...: HXNCM Matrix.....: WG

Date Sampled...: 02/15/06 13:00 Date Received..: 02/17/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	440	10	mg/L	MCAWW 160.1	02/21-02/22/06	6052269
301105	Di	lution Fact	or: 1	• ,		
Total Suspended Solids	ND.	4.0	mg/L ·	MCAWW 160.2	02/20/06	6051262
	Dil	ution Fact	or: 1			

STL North Canton

Client Sample ID: L-7529-5

GC/MS Volatiles

Lot-Sample #...: H6B180108-001 Work Order #...: HXPWPlAA Matrix...... AIR

Date Sampled...: 02/15/06 Date Received..: 02/18/06 Prep Date....: 02/17/06 Analysis Date..: 02/18/06

Prep Batch #...: 6049044

Dilution Factor: 5 Method.....: EPA-19 TO-14

•.	•	REPORTING	• •.
PARAMETER	RESULT	LIMIT	UNITS
Bromodichloromethane	ND	1.0	ppb (v/v)
Bromoform	ND _	1.0	ppb (v/v)
Dibromochloromethane	ND	1.0	ppb(v/v)
Dibromomethane	ND	2.0	ppb(v/v)
trans-1,2-Dichloroethene	ND	1.0	ppb (v/v)
Cumene	ND	2.0	ppb(v/v)
n-Propylbenzene	ND	2.0	ppb (v/v)
1,2,3-Trichloropropane	ND	2.5	ppb(v/v)
Dichlorodifluoromethane	ND	2.0	ppb(v/v)
Vinyl chloride	2.1	2.0	ppb(v/v)
Chloroethane	ND	2.0	ppb(v/v)
Trichlorofluoromethane	ND	2.0	ppb(v/v)
1,1-Dichloroethene	ND	1.0	ppb(v/v)
1,1-Dichloroethane	ND	1.0	ppb(v/v)
cis-1,2-Dichloroethene	ND	1.0	ppb(v/v)
Chloroform	ND ·	1.0	ppb(v/v)
1,1,1-Trichloroethane	ND	1.0	ppb(v/v)
Carbon tetrachloride	ND	1.0	ppb(v/v)
Benzene	ND	1.0	ppb(v/v)
1,2-Dichloroethane	ND	1.0	ppb(v/v)
Trichloroethene	ND	1.0	ppb(v/v)
1,2-Dichloropropane	ND	1.0	ppb(v/v)
cis-1,3-Dichloropropene	ND	1.0	ppb(v/v)
Toluene	ND	1.0	ppb(v/v)
trans-1,3-Dichloropropene	ND	1.0	ppb(v/v)
1,1,2-Trichloroethane	ND	1.0	ppb(v/v)
Tetrachloroethene	ND	1.0	ppb(v/v)
1,2-Dibromoethane (EDB)	ND	1.0	ppb(v/v)
Chlorobenzene	ND	1.0	ppb(v/v)
Ethylbenzene	ND .	1.0	ppb(v/v)
m-Xylene & p-Xylene	ND	1.0.	ppb(v/v)
o-Xylene	ND	1.0	ppb(v/v)
Styrene	ND	1.0	ppb(v/v)
1,1,2,2-Tetrachloroethane	ND	1.0	ppb(v/v)
1,3,5-Trimethylbenzene	ND .	1.0	ppb(v/v)
1,3-Dichlorobenzene	ND	1.0	ppb(v/v)
1,4-Dichlorobenzene	ND	1.0	ppb(v/v)
1,2-Dichlorobenzene	ND .	1.0	ppb(v/v)

(Continued on next page)

Client Sample ID: L-7529-5

GC/MS Volatiles

Lot-Sample #:	H6B180108-001	Work Order #:	HXPWP1AA	Matrix:	AIR

	PERCENT	RECOVERY
SURROGATE	RECOVERY	LIMITS
1,2-Dichloroethane-d4	112	(70 - 130)
Toluene-d8	107	(70 - 130)
4-Bromofluorobenzene	100	(70 - 130)

L-7529-5

GC/MS Volatiles

Lot-Sample #: H6B180108-001

Work Order #: HXPWP1AA

Matrix: AIR

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

		ESTIMATED		RETENTION	
PARAMETER	CAS #	RESULT		TIME	UNITS
Unknown		18 NJ	M	4.077	ppb(v/v)
Methyl Alcohol	67-56-1	210 NJ	М	4.5288	ppb(v/v)

NOTE(S):

M. Result was measured against nearest internal standard assuming a response factor of 1.

EXYGEN RESEARCH

Client Sample ID: L-7529-6

GC/MS Volatiles

Lot-Sample #...: H6B180108-002 Work Order #...: HXPWQ1AA Matrix...... AIR

Date Sampled...: 02/15/06 Date Received..: 02/18/06
Prep Date....: 02/17/06 Analysis Date..: 02/18/06

Prep Batch #...: 6049044

Dilution Factor: 5 Method..... EPA-19 TO-14

	•	REPORTING	
PARAMETER	RESULT	LIMIT	UNITS
Bromodichloromethane	ND	1.0	ppb(v/v)
Bromoform	ND	1.0	ppb(v/v)
Dibromochloromethane	ND	1.0	ppb(v/v)
Dibromomethane	ND	2.0	ppb(v/v)
trans-1,2-Dichloroethene	ND	1.0	ppb(v/v)
Cumene	ND	2.0	ppb(v/v)
n-Propylbenzene	ND	2.0	ppb(v/v)
1,2,3-Trichloropropane	ND	2.5	ppb(v/v)
Dichlorodifluoromethane	ND	2.0	ppb (v/v)
Vinyl chloride	ND	2.0	ppb (v/v)
Chloroethane	ND.	2.0	ppb(v/v)
Trichlorofluoromethane	ND	2.0	ppb(v/v)
1,1-Dichloroethene	ND	1.0	ppb(v/v).
1,1-Dichloroethane	ND	1.0	ppb(v/v)
cis-1,2-Dichloroethene	ND	1.0	ppb(v/v)
Chloroform	ND	1.0	ppb(v/v)
1,1,1-Trichloroethane	ND	1.0	ppb(v/v)
Carbon tetrachloride	ND	1.0	ppb(v/v)
Benzene	ND	1.0	ppb(v/v)
1,2-Dichloroethane	ND	1.0	ppb(v/v)
Trichloroethene	ND	1.0	ppb(v/v)
1,2-Dichloropropane	ND	1.0	ppb(v/v)
cis-1,3-Dichloropropene	ND	1.0	ppb(v/v)
Toluene	ND	1.0	ppb(v/v)
trans-1,3-Dichloropropene	ND	1.0	ppb(v/v)
1,1,2-Trichloroethane	· ND	1.0	ppb(v/v)
Tetrachloroethene	ND	1.0	ppb(v/v)
1,2-Dibromoethane (EDB)	ND	1.0	ppb(v/v)
Chlorobenzene	ND	1.0	ppb(v/v)
Ethylbenzene	ND	1.0	ppb(v/v)
m-Xylene & p-Xylene	ND	1.0	ppb(v/v)
o-Xylene	ND	1.0	ppb(v/v)
Styrene	ND	1.0	ppb(v/v)
1,1,2,2-Tetrachloroethane	ND	1.0	ppb(v/v)
1,3,5-Trimethylbenzene	ND	1.0	ppb(v/v)
1,3-Dichlorobenzene	ND ,	1.0	ppb(v/v)
1,4-Dichlorobenzene	ND	1.0	ppb (v/v)
1,2-Dichlorobenzene	1.2	1.0	ppb (v/v)

(Continued on next page)

EXYGEN RESEARCH

Client Sample ID: L-7529-6

GC/MS Volatiles

Lot-Sample #: H6B180108-002 W	Work Order #:	HXPWQ1AA	Matrix AIR
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	PERCENT	RECOVERY
SURROGATE	RECOVERY	LIMITS
1,2-Dichloroethane-d4	113	(70 - 130)
Toluene-d8	103	(70 - 130)
4-Bromofluorobenzene	100	(70 - 130)

KXYGEN RESEARCH

L-7529-6

GC/MS Volatiles

Lot-Sample #: H6B180108-002

Work Order #: HXPWQlAA

Matrix: AIR

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

		ESTIMATED	RETENTION	
PARAMETER	CAS #	RESULT	TIME	UNITS
Unknown		20 NJ M	4.0825	ppb(v/v)
Methyl Alcohol	67-56-1	200 NJ M	4.529	ppb(v/v)

NOTE (S):

M Result was measured against nearest internal standard assuming a response factor of 1.

3049 Enterprise Drive

State College, PA 16801

Phone (814) 238-5927

February 21, 2006

Mr. Jeff Biss Exygen Research 3117 Research Dr. State College, PA 16801

ANALYTICAL LABORATŌRY REPORT

Sample Identification: L7529-0003

Date Collected: 02/15/06

Time Collected: 1300

Lab ID Number: 59641

Collected By: --

Analyte:	Result:	Analyzed by: Date/Fime:
BOD (mg/l) SM 5210	< 2	DB 02/16/06 @ 1420

Submitted By

Diana Bopp Laboratory Manager

ATTACHMENT 5

TWO ACUTE TOXICITY EVALUATIONS FOR TREATMENT PLANT EFFLUENT FEBRUARY 14 THROUGH 18, 2006 NEASE CHEMICAL SITE, SALEM, OHIO

RESULTS OF TWO ACUTE TOXICITY EVALUATIONS OF RUTGERS ORGANICS CORPORATION, SALEM SITE LAGOON WATER TREATMENT PLANT FINAL EFFLUENT

AAT JOB # 51 - 01 - 76

14 February – 18 February 2006

Report Prepared for:

Rutgers Organics Corporation 201 Struble Road State College, Pennsylvania 16801

Report Prepared by:

AMERICAN AQUATIC TESTING, INC. 890 NORTH GRAHAM STREET ALLENTOWN, PENNSYLVANIA 18109

INTRODUCTION

A set of two static acute toxicity tests were conducted with larval fathead minnows, *Pimephales promelas* (P. promelas) and the freshwater cladoceran, Ceriodaphnia dubia (C. dubia) to determine the relative toxicity of final effluent from the Rutgers Organics Corporation Lagoon Water Treatment Plant, Salem, Ohio. The 96-hour static fathead acute toxicity test and the 48-hour static C. dubia acute toxicity tests were conducted from 14 February through 18 February 2006. The toxicity evaluations were conducted by American Aquatic Testing, Inc., Allentown, Pennsylvania.

All tests were performed according to procedures outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, 4th Edition (EPA/600/4-90/027F) and Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency, October 1991.

MATERIALS

TEST ORGANSIMS

Fathead Minnow, Pimephales promelas

Larval fathead minnows used in acute testing were obtained from in-house cultures maintained by ABS,Inc.. Test age organisms are maintained in shallow depth basins containing 10L of moderately hard reconstituted water and are fed newly hatched *Artemia* (brine shrimp) nauplii twice a day up until test initiation. The test organisms were 8 days old at test initiation. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing.

Freshwater Cladoceran, Ceriodaphnia dubia

Cladoceran neonates, C. dubia were obtained from AAT, Inc.'s in-house cultures. Cultures for generating test age (<24 hours old) neonates are maintained as single cultures in 30 mL soufflé cups containing 15 mL of moderately hard reconstituted water. These adults are transferred daily into fresh culture water and are fed a combination of a unicellular green alga (Selenastrum capricornutum) and a yeast/Cerophyll/trout chow (YCT) suspension. Broods released during a five hour period were pooled and used to initiate the acute toxicity test. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing. Neonates were released between 0800 and 1300 of February 14, 2006.

DILUTION WATER

Moderately hard reconstituted water was prepared in accordance to procedures outlined in EPA/600/4-90/027F and was used as dilution/control water for the toxicity tests. Deionized water (Specialty Filtration Products) and reagent grade chemicals were used to achieve the following concentrations: 96 mg/L of NaHCO₃, 60.0 mg/L of MgSO₄ and 4.0 mg/L of KCl and 60.0mg/L of CaSO₄ 2H₂O.

TEST MATERIAL

The material tested was final effluent collected by Howells and Baird personnel with a grab sampler placed at the outfall. One grab sample was collected for each of the two acute toxicity tests. The sample, collected February 13, 2006, was shipped overnight to AAT, Inc. in a cooler containing ice and was used to initiate testing on February 14, 2006. A Chain-of-Custody accompanied the sample. Tests were initiated prior to the expiration of the 36-hour holding time.

METHODS

P. promelas larvae (8 day old) were exposed to the effluent sample for 96 hours under static, non-renewal conditions. Test organisms were exposed in groups of 10 in 1 L glass beakers containing 500 mL of test solution with two replicates per concentration (20 organisms per concentration). The test organisms were fed prior to test initiation and at 48 hours.

C. dubia neonates (<24 hours old) were exposed to the effluent sample for 48 hours under static non-renewal conditions. Test organisms were exposed in groups of five in 30 mL soufflé cups containing 15 mL of test solution with four replicates per concentration (20 organisms per concentration). The test organisms were not fed during the test exposure.

Both sets of test chambers were placed in randomized positions in a temperature controlled environment maintained at 25 ± 1 ° C. The highest concentration used for exposure was 100 %. A 0.56 dilution schedule was used to prepare sample concentrations of 56%, 32%, 18% and 10%, by volume. A control sample consisting of 100 % dilution water was also tested.

Surviving test organisms were counted daily. Dead test organisms and debris were removed daily at this time. Temperature was measured daily in a surrogate replicate placed alongside the test chambers. Dissolved oxygen, pH and conductivity were measured in one replicate chamber at each concentration at the beginning and end of the test exposure. Alkalinity and hardness were measured in the control and the 100% concentration at the beginning of the test exposure. The lighting regime was 16 hours light, 08 hours dark.

RESULTS

FATHEAD MINNOW 96-HOUR ACUTE TEST RESULTS

As a result of less than 50 % mortality in any test concentration during the exposure period the acute data was evaluated visually. Therefore, the 96-hour LC_{50} is > 100%. This result yields an Acute Toxic Unit; $TUa~(100\%/LC_{50})$ of 1.0.

CERIODAPHNIA DUBIA 48-HOUR ACUTE TEST RESULTS

As a result of less than 50 % mortality in any test concentration during the exposure period the acute data was evaluated visually. Therefore, the 48-hour LC₅₀ is > 100%. This result yields an Acute Toxic Unit; TUa $(100\%/LC_{50})$ of 1.0.

Table I. Fathead Minnow Mortality Data

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant

TEST: 96-hour Definitive Acute Toxicity Test

DATE: 14 February – 18 February 2006

	Cumulative number of organisms affected at										
Sample	%	# of	24 hr	48 hr	72 hr	96 hr	%				
Туре	Effluent	Organisms					Mortality*				
	0	20	0	0	0	0	0				
	10	20	0	0	0	0	0				
Final	18	20	0	0	0	0	0				
Effluent	32	20	0	0	0	0	0				
{	56	20	0	0	0	0	0				
	100	20	0	0	0	0	0				

^{*} Cumulative Percent Mortality at 96 hours

Table II. Fathead Minnow Physical/Chemical Measurements

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant

TEST: 96-hour Definitive Acute Toxicity Test

DATE: 14 February – 18 February 2006

ſ	% Effluent by Volume							
Time	0	10	18	32	56	100		
0 hour								
Conduct. µmhos	299	340	374	428	546	731		
D.O. ppm	7.8	7.7	7.5	7.3	6.8	6.6		
Temp. °C A	25.0	25.0	25.5	26.0	26.0	26.0		
В	25.0	25.0	25.5	26.0	26.0	26.0		
pH Std .units	8.1	8.0	8.1	8.2	8.3	8.3		
Alkalinity mg/L	.60		ļ	j	}	210		
Hardness mg/L	100					280		
1	į	Ì						
24 hours A	25.0	25.0	25.0	25.0	25.0	25.0		
Temp. °C B	25.0	25.0	25.0	25.0	25.0	25.0		
48 hours A	25.0	25.0	25.0	25.0	25.0	25.0		
Temp. °C B	25.0	25.0	25.0	25.0	25.0	25.0		
72 hours A	25.0	25.0	25.0	25.0	25.0	25.0		
Temp. °C B	25.0	25.0	25.0	25.0	25.0	25.0		
96 hours		!						
Conduct. µmhos	335	380	419	481	619	812		
D.O. ppm	7.2	7.3	7.4	7.4	7.3	7.2		
pH Std .units	8.0	8.0	8.1	8.2	8.3	8.4		
Temp. °C A	24.5	24.0	24.0	24.0	24.0	24.0		
В	24.0	24.0	24.0	24.0	24.0	24.0		

Table I.

Ceriodaphnia dubia Mortality Data

CLIENT:

Rutgers Organics Corp., Salem Lagoon Water Treatment Plant

TEST:

48 hour Definitive Acute Toxicity Test

DATE:

14 February - February 16 2006

Cumulative number of organism affected at

Sample	%	# of			%
Type	Effluent	Organisms	24 hours	48 hours	Mortality*
	0	20	0	0	0
}	10	20	0	0	0
Final	18	20	0	0	0
Effluent	32	20	0	0	0
}	56	20	0	0	0
	100	20	0	0	0

^{*} Cumulative Percent Mortality at 48 hours

Table II.

Ceriodaphnia dubia Physical/Chemical Measurements

CLIENT:

Rutgers Organics Corp., Salem Lagoon Water Treatment Plant

TEST:

48 hour Definitive Acute Toxicity Test

DATE:

14 February – February 16 2006

	% Effluent by Volume						
Time	0	10	18	32	56	100	
0 hour		}					
Conduct. µmhos	299	340	374	428	546	731	
D.O. ppm	7.8	7.7	7.5	7.3	6.8	5.6	
Temp. °C	25.0	25.0	25.0	26.0	26.0	26.0	
pH Std .units	8.1	8.0	8.1	8.2	8.3	8.3	
Alkalinity mg/L	60					210	
Hardness mg/L	100				 	280	
24 hours					i		
Temp. °C	25.0	25.0	25.0	25.0	25.0	25.0	
48 hours]	[
Conduct. µmhos	405	450	479	568	687	857	
D.O. ppm	8.3	8.2	8.2	8.2	8.2	8.1	
pH Std .units	8.1	8.1	8.1	8.1	8.4	8.4	
Temp. °C	25.0	25.0	25.0	25.0	25.0	25.0	

APPENDIX I

RAW DATA

14 February - 16 February 2006

RESULTS OF TWO ACUTE TOXICITY EVALUATIONS OF RUTGERS ORGANICS CORPORATION, SALEM SITE LAGOON WATER TREATMENT PLANT FINAL EFFLUENT

Freshwater Acute Test

EI NI ai	American Aquatic Testing, Inc.	11 41
Job #: 51-01-76	_	Start Date/Time: 3/14/06 /455
Species: Prometas	_	End Date/Time: 3/18/06 144
Dilution Water: EPA mod Haal	-	Test Type: 96 hr SNR

Concentration	Rep.		Li	ve Cou	nt			Tem	perature) (C)	
		0 hr.	24 hr.	48 hr.	72 hr.	96 hr.	0 hr.	24 hr.	48 hr.	72 hr.	96 hr.
Control	A	10	10	10	10	10	25.0	25.0	25.0	250	245
	В	10	10	10	10	10	250	25.0	25-0	25.0	24.0
10%	Α	10	10	10	10	10	25.0	25.0	25.0	25~0	24.0
	В	10	10	10	10	10	250	25.0	25.0	25,0	24.0
18%	Α	10	10	10	10	10	255	25.0	25-0	25,0	24.0
	В	io	10	10	10	10	25.5	25.0	25-0	25.0	24.0
32%	Α	10	10	10	10	10	26.0	250	25.0	25,0	24.0
	В	10	10	10	10	10	26.0	25.0	2510	25.0	24.0
56%	Α	10	10	io	10	Ю	26.0	25.0	25.0	25,0	240
	В	10	10	10	10	10	260	250	25.0	25.0	24.0
100%	Α	10	10	10	10	HO	260	250	25.0	25.0	240
	В	10	10	10	10	10	260	25.0	25.0	25.0	24.0
Initials		NOW	Q)	780	700	VOL	D- HAL SQ 700 700		Dc		
Date		آبارا	2/15	2/16	2/17	2118	214	2/15	2/16	12/17	2118

Concentration	Р		D.O. (mg/L)		Cond.	(umhos)
	0 hr.	96 hr.	0 hr.	96 hr.	0 hr.	96 hr.
Control	8-1	8.0	78	7.2	299	335
10%	80	8.0	7.7	17.3	340	300
18%	8.1	8.1	7.5	7.4	374	419
32%	8.2	8.2	13	7.4	428	481
56%	8.3	8.3	128	7-3	546	619
100%	8.3	8.4	36	7.2	731	812
Initials	UDU	VOL	VOU	1X	VAL	NC
Date	2/14	2/18	ひと	2118	214	2/18

Concentration	Alkalinity (mg/L)	Hardness (mg/L)
Control	60	100
100%	<u>અ</u> 0	280
Initials	KOL	VOL
Date	214	2/14
Abana estiman	1. 1/\(\lambda_{\psi}\)	——— -

Observations:	(1) 6.6 MM 2/19

Freshwater Acute Test

American Aquatic Testing, Inc.

Job #: 51-01-76 Start Date/Time: 2-14-06 1430

Species: C.d.bia End Date/Time: 2-16-06 1430

Dilution Water: EPA Mod. Hard Test Type: 48hr. SMR

Conc.	Tem	perature	(C)
%	0 hr.	24 hr.	48 hr.
Control	2510	25.0	25.0
10	250	75.0	25-0
18	25.0	25.0	25-0
32	260	25.0	25.0
56	260	25.0	25-0
100	26.0	25.0	25.0
Conc.	pH	l (Stand ur	nits)
%	0 hr.		48 hr.
Control	8.1		8.1
10	8.0	1	8.1
18	8.1		8.1
32	8.2		8.1
56	8.3		8.4
100	8.3	<u> </u>	8.4
Conc.	Dissolv	red Oxyge	n (mg/L)
Control	7.8		8.3
10	7.1		8.2
18	7.5]	8.2
32	7.3		8.2
56	6-8		8.2
100	5.6	<u> </u>	8.1
Conc.	Con	ductivity (u	mhos)
Control	299		405
10	340	_	450
18	374		479
32	428		568
56	546		687
100	731		857
Initials	VDV	NEP	TOP
Date		15/10	2/11

Conc.	Rep.		Live Count			
%	nop.	0 hr.	24 hr.	48 hr.		
	Α	5	5			
Control	В		- 			
GOHILOI	C		=			
l l	<u> </u>	2	2			
	D	<u> </u>	2			
10	A B C		2	-5		
10	В	2	5			
ļ	C	<u></u>	5	5		
	D	5 5 5 5 5 5 5	5	5		
	A B	5	5	5		
18	В	5	5	_5_		
	С	L5	5	5		
	D	5	5	5		
	Α	5	5	5		
32	В	5	1	5		
	В	5	5	5		
	D	5	5	5		
	Α	5	5	5		
56	В	5	5	5		
	B C	5	5	5		
	D	5	5	5		
	Α	55555555555	5	5		
100	B	5	5	5		
	С	5	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		
	D	5				
Initia	ls	NPP	MP	790		
Date	•	214	1215	2/16		

nitials	VDV	NPP	TOP	
Date	214	2/15	2/16	
	,		7	
Conc.	Alkalinity	Hardness	}	
Control	60	100]	

Observations:

0000	MADINITY	1141411692	
Control	60	100	
100%	210	230	
Initials	WOU	VAL	
Date	યાપ	2/14	

CHAIN OF CUSTODY AMERICAN AQUATIC TESTING, INC. Client: Howels : Baird - Rutgers Org Client Contact: Denny Lane Job#: 51-01-76 890 North Graham St. Address: Salem, OH ALLENTOWN, PA 18109 Sample Return to client Phone #: 330-332 - 4834 610 434 9015 Lab disposal Disposal: SAMPLE INFORMATION **Initial Chemistry Toxicity Testing** Upon Arrival @ Laboratory Requested Dis. CI-Sample Sample Sample Sample Temp pΗ Alk. Hard. Sample Type Chronic Sample Identification Acute Sediment Othe O_2 mg/L mg/L mg/L C = Comp G=Grab Volume Date Time 1300 2.5 ga 6.0 OUTFALL 2-13-06 G 2-13-06 0 Samples were: 1. Collected by AAT personnel 2. Transported on ice? 3. Received with in holding time? 4. Sample matrix is: Liquid Sediment [] Soil [] Other Client personnel Yes [X] No [] Yes [> No [] **CUSTODY INFORMATION** Lab Use Received by: Relinquished by: Received for Lab: Sample # Relinquished by: Time Date Time Date ISTN# D.L.L Feder 2-13-06 Fedex 01 1500 2-14-06 920 06097 Special Instructions: Dilution water collection date(s) Will ammonia be analyzed on these samples? No Yes Will additional parameters be analyzed on these samples? Yes

APPENDIX II OHIO EPA NPDES BIOMONITORING REPORT FORM

Date Created: 04/13/98 Page 1 of 6

Last Revised: 04/13/98

OHIO EPA NPDES BIOMONITORING REPORT FORM

GENERAL INFORMATION

1. Facility Name: Rutgers Organics Corporation

Reporting Date: 03 March 2006

2. Address: 1224 Benton Road

Salem, Ohio 44460

Substantive

- 3. Ohio EPA Permit Number: Discharge Criteria 4.Application (NPDES) No.
- 5. Facility Contact: Ralph Pearce 6. Phone No.: (800) 458-3434
- 7. Consultant/Testing Lab Name: American Aquatic testing, Inc.
- 8. Consultant/Lab Contact: Chris Nally 9. Phone No.: (610) 434-9015
- 10. Receiving Water(s) of Discharge: <u>Unnamed Tributary of the Middle Fork of Middle Creek</u>.
- 11. Outfall(s) Tested: 001

Average Daily Flows: on Day Sampled (gal/day)

12. Is your current Standard Operating Procedure (SOP) Manual on file with Ohio EPA? (Yes/No) No If yes, date submitted: . If no, an SOP that follows Ohio EPA and/or U.S. EPA protocols must be submitted as soon as possible in order to eliminate the need to include this information with every report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Christopher J./Na/l/, Fresider

Date

OEPA Permit No.:	Page	2	of _	6
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ACUTE TOXICITY TEST SAMPLING DATA

TABLE

Sampling S	Summary for Acute 1	Toxicity Tests	
	Sample Co	llection	
Sampling Location & Description Final Effluent:	Beginning MM/DD/Time 02/13/06 1300	Ending MM/DD/Time N/A	Weather/Receiving Stream Conditions
Outfall No.: 001			
Type (Grab/Composite): Grab			
Volume Collected: 1.0-gallon			
Upstream Station:	N/A .		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Downstream Station (Near-field):	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Additional Stations (If needed):	N/A		
Waterbody:			•
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			

OEPA	Permit	No.:			
			TOXICITY	TEST	CONDITIONS

Page <u>3</u> of <u>6</u>

TABLE

Summary of Toxicity Test Conditions

1. Test Species and Age:

2. Test Type and Duration:

3. Test Dates:

4. Test Temperature (°C):

5. Light Quality:

6. Photoperiod:

7. Feeding Regime:

8. Size of Test Vessel:

9. Volume and Depth of Test Solutions:

10. No. of Test Organisms per Test Vessel:

11. No. of Test Vessels per Test Solution:

12. Total No. of Test Organisms per Test Solution:

13. Test Concentrations (as
 percent by volume effluent):

14. Renewal of Test Solutions:

15. Dilution and Primary Control Water:

16. Secondary Control Water:

17. Aeration? Before/During Test:

18. Endpoints Measured:

19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent: Pimephales promelas - 8 days old

96-hour Static Acute

14 February - 18 February 2006

25.0°C ± 1.0°C

50-100 ft. candles

16 hours light / 8 hours dark

None

1000 mL

500 mL / 92 mm

Ten

Two

20

0, 10, 18, 32, 56, and 100%

None

Moderately Hard Reconstituted Water

N/A

None

LC₅₀ and TU_a

N/A

OEPA Permit No.:			VICION D	nam	ma.	Page	4 of	6
TABLE	<i>F</i>	COTE TO	XICITY T	EST RESUI	.TS 			
Results of a <u>Pimephales promelas</u> 96 -Hour Static Acute Toxicity Test (genus) (species) Conducted 02/14/06 - 02/18/06 Using Effluent from Outfall 001 . (mm/dd/yy) (mm/dd/yy) (number)						·		
Test Solutions	Cumulat (Cumulat 24-Hr		cent Mor	_	24-Hr	LC ₅₀ Va (EC ₅₀ Va		96-Hr
Primary Control/ Dilution Water	0 (_0_)	0 (_0_)	0 (_0_)		>100% (<u>N/A</u>)	>100% (<u>N/A</u>)	>100% (<u>N/A</u>)	>100% (<u>N/A</u>)
Secondary Control	<u>N/A</u>	()	()	()	(EC ₅₀ 95	5% Confi	dence Li	mits)
10_% Effluent	0	0	_0	0	24-Hr	48-Hr 	72-Hr	96-Hr
18_% Effluent	(<u>0</u>) <u>0</u> (<u>0</u>)	(<u>0</u>)	(<u>0</u>) <u>0</u> (<u>0</u>)	(<u>0</u>) <u>0</u> (<u>0</u>)	LL <u>N/A</u> UL <u>N/A</u>			<u>N/A</u> <u>N/A</u>
32_% Effluent	<u> </u>	<u> </u>	<u>0</u> (<u>0</u>)	<u> </u>	LL (<u>N/A</u>) UL (<u>N/A</u>)	. ()	()	()
56 % Effluent	<u> </u>	<u> </u>		_ <u>0</u> (<u>0</u>)	LL = Lower			
100 % Effluent	<u> </u>	<u> </u>		0	Calculated	d TU _a Val	lue:	1.0
Near-Field Sample		()	()	()	Method(s) EC ₅₀ , and	Confiden		Values:

a-cumulative percent affected is the total percentage of test organisms observed dead, immotile, exhibiting loss of equilibrium, or other defined endpoints (specify below):

			·
	Downit	NT.	
UEPA	Permit	NO.:	

Page <u>5</u> of <u>6</u>

TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions

1. Test Species and Age:

2. Test Type and Duration:

3. Test Dates:

4. Test Temperature (°C):

5. Light Quality:

6. Photoperiod:

7. Feeding Regime:

8. Size of Test Vessel:

9. Volume and Depth of Test Solutions:

10. No. of Test Organisms per Test Vessel:

11. No. of Test Vessels per Test Solution:

12. Total No. of Test Organisms

per Test Solution:

13. Test Concentrations (as
 percent by volume effluent):

14. Renewal of Test Solutions:

15. Dilution and Primary Control Water:

16. Secondary Control Water:

17. Aeration? Before/During Test:

18. Endpoints Measured:

19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with

alternative diluent:

Ceriodaphnia dubia - <24-hours old

48-hour Static Acute

14 February - 16 February 2006

25.0°C ± 1°C

50-100 ft candles

16 hours light / 8 hours dark

None

30 mL

25 mL / 25 mm

Five

Four

20

0, 10, 18, 32, 56, and 100%

None

Moderately Hard Reconstituted Water

N/A

None

LC₅₀ and TU_a

N/A

DEPA Permit No.:	A	CUTE TO	KICITY T	EST RESUI	Page <u>6</u> of <u>6</u> LTS
Conducted 02/1	(genus)	(s 16/06 t	species) Jsing Ef:		Hour Static Acute Toxicity Test rom Outfall (number)
Test Solutions	Cumulat (Cumulat 24-Hr	ive Perc		_	LC _{so} Values (EC _{so} Values) 24-Hr 48-Hr 72-Hr 96-Hr
Primary Control/ Dilution Water	<u> </u>		(()	<u>>100%</u> <u>>100%</u> (<u>N/A</u>) (<u>N/A</u>) () ()
Secondary Control	_N/A ()	()	()	()	LC ₅₀ 95% Confidence Limits (EC ₅₀ 95% Confidence Limits)
10_% Effluent	(_0_)	0 ()	()	()	24-Hr 48-Hr 72-Hr 96-Hr
18 % Effluent	(_0_)	<u> </u>	()	()	UL N/A N/A
32 % Effluent	(_0_)	. (_0_)	()	()	LL (<u>N/A</u>) (<u>N/A</u>) () () UL (<u>N/A</u>) (<u>N/A</u>) () ()
56_% Effluent	(_0_)		()	()	LL = Lower Limit UL = Upper Limit
% Effluent		<u>0</u> ()	()	()	Calculated TU _a Value:1.0
Near-Field Sample	_ <u>N/A</u> ()	()	()	()	Method(s) Used to Determine LC_{50} , EC_{50} , and Confidence Limit Values: Visual Inspection
a-cumulative perc	ent affecte	ed is the	e total	percenta	ge of test organisms observed dead,

immotile, exhibiting loss of equilibrium, or other defined endpoints (specify below):